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# Aesthetic Assessment and Recommendations for the Proposed VELCO Lamoille County Project Transmission Line and Substation Upgrades

Docket No. 7032, VELCO Lamoille County Project

Submitted to:  
State of Vermont  
Department of Public Service  
Montpelier, VT

Submitted by:  
LandWorks  
Middlebury, VT

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## Introduction to the Report

This aesthetic assessment and report is submitted to the Vermont Department of Public Service in response to its request for assistance in evaluating the aesthetic impacts associated with Public Service Board Docket 7032, the so-called “Lamoille County Project” (LCP), as proposed in the Joint Petition of the Vermont Electric Power Company, Inc. (VELCO), Green Mountain Power Corporation (GMP) and Stowe Electric Department for a Certificate of Public Good (CPG).

### Aesthetics (n)

1. the branch of philosophy dealing with such notions as the beautiful, the ugly, the sublime, the comic, etc., as applicable to the fine arts, with a view to establishing the meaning and validity of critical judgments concerning works of art, and the principles underlying or justifying such judgments. 2. the study of the mind and emotions in relation to the sense of beauty.

This report contains several sections, beginning with an overview of the Project’s overall context and then continuing with a summary review and mitigation recommendation for those areas with the highest aesthetic sensitivity. A section-by-section analysis follows, and the report concludes with an evaluation of applicable community standards, references to guidelines for mitigation, and a series of exhibits in support of this report and its conclusions.

The overall conclusion of this report is that, as proposed, in some locations the LCP will have an undue adverse effect on aesthetics. These locations are discussed in the section on highly sensitive areas, entitled “Mitigation Analysis for Areas of Highest Aesthetic Sensitivity.” For each such location, mitigation measures are recommended and, with such mitigation measures implemented, it can be concluded that the LCP’s effect on aesthetics will not be unduly adverse.

Our methodology for this project included visual and cartographic analysis, interviews, document research and review. Our primary analysis assesses the project’s visibility and potential for visual and aesthetic impacts, with a focus on viewsheds from major federal, state or local roads, and public investments, which includes relationships to nearby areas of public interest, high scenic value and/or official designation as a cultural, aesthetic or recreational facility or resource, as well as road crossings and locations that involve individual residences or residential areas. We have used on-site and field study to reinforce our analysis and findings. The technical expertise of the Department of Public Service and their consultants has also provided guidance for this report. We have used the documents and exhibits provided/ submitted by VELCO, including but not limited to the Direct Testimony Volumes I and II and the Exhibits of VELCO on Direct Volumes I, II and III. Finally, our overall conclusions address the criteria set forth in the Quechee Decision, as developed by the Vermont Environmental Board for aesthetic analysis and conclusions. The Public Service Board has adopted the Quechee Analysis as the standard for the review of aesthetics under Section

248.

Specifically, our analysis included but was not limited to:

- 1) An assessment of viewsheds, land uses and development patterns (both current and historic) in the vicinity of the proposed project area;
- 2) topography and slope;
- 3) Existing vegetation and forest cover, natural resource qualities;
- 4) Overall landscape character, which factored in the qualities and conditions present as well as the proximity and relation to the project;
- 5) Historical and cultural resources and public investments such as state lands;
- 6) Visual conditions and views as experienced and as analyzed;
- 7) Documentation provided with regard to history, use, character and conditions of various areas affected, such as the State Forest; and
- 8) Some sense and understanding of public concerns as they have been voiced both informally and formally during field trips, interviews and through available documentation.

It is important to note that the conclusions to our analysis and mitigation recommendations are based on incomplete information provided by VELCO in its testimony and exhibits and responses to discovery, most notably with regard to the extent of the clearing required for many sections of the transmission corridor. Conversely, Exhibit RCJ-24, which are plans and profiles/cross sections of the corridor, has provided important information with regard to pole heights for the proposed 115kV line.

### The Overall Project Context

Any analysis of the aesthetic impacts of a project must include a description and understanding of the context for that project and the character of the area. We must address the “fit” of the project to that area and answer the question as to whether the project, as proposed, and given its qualities and elements, will be in harmony with its surroundings. The impact to open space must be addressed. Finally, and perhaps most important, is a determination as to the project’s visibility.



Historic photo of Mount Mansfield overlooking Waterbury Dam in early spring. Source: [www.uvm.edu/perkins/landscape](http://www.uvm.edu/perkins/landscape)

### The Project Area

The Lamoille County 115kV Project is located in a section of Lamoille County that includes some extensive public land holdings, developing residential and commercial areas, and has traditionally been a locus of tourism visits and recreational activities. The proposed project is located within four towns, two of which are particularly rural, Moretown and Duxbury and two of which are developing with tourism, commercial, industrial and residential uses and their associated infrastructure.

The region affected by the proposed LCP has a distinct physiography that is delineated by two prominent mountain ranges, the high ridge of the main spine of the Green Mountains culminating in the state's highest peak, Mt. Mansfield, and to the east the Worcester Mountain Range. There are a number of hillsides, ridgelines and heights of land that are also part of the project area, and in the heart of the project area is the Mt. Mansfield State Forest and the Waterbury Reservoir, an important recreational and natural resource environment with high quality aesthetic values that are integral both to the regions character and quality of life. Key natural features which demarcate the project area, aside from the Reservoir itself are Crosset Hill in Duxbury, at the base of which a new corridor is proposed, the Winooski River and valley, over which the transmission line crosses, Blush Hill and Gregg Hill in Waterbury, along which the corridor continues, and the slopes and summits of Woodward and Ricker Mountain, rising to well over 3000 feet, providing the western backdrop for the Waterbury Reservoir. The Thatcher Brook empties into the eastern end of the Waterbury Reservoir. In Stowe, the Little River crossing represents another natural resource and open space area affected by the project as it is currently designed. The Little River drainage, along with Alder Brook create a lower area through which Route 100 travels just to the east of the transmission corridor. The north south transmission corridor from Duxbury to Stowe varies in elevation from a low of 420 feet at the Winooski River to a high point of approximately 900 feet above sea level at Gregg Hill.

Downtown Waterbury and the villages of Waterbury Center and Moscow are part of the area affected and potentially served by this project and its associated upgrades. The principal transmission corridor route through Waterbury and Stowe follows a right-of-way and transmission line established as long ago as 1948-49 (Exhibit Boyle-Portz-3, p.7) and residences have been built adjacent to and in the vicinity of the corridor since that time. The terminus of the proposed project will be at the proposed new site at the Wilkins substation at the southern end of Stowe's Lower village substation.

It should be pointed out that this area has a number of other extant transmission corridors and utility infrastructure elements such as distribution lines along many of the roads and routes affected by the proposed project. A lesson learned from VELCO's NRP in the Champlain Valley and Rutland County indicates that, despite the presence of such existing elements, the cumulative or additional aesthetic impact of a proposed transmission facility upgrade is not something affected parties along the route or adjacent to the upgrades are readily willing to accept- the increase of visibility and scale is often not acceptable to such parties, and those parties may conclude that the proposal is offensive, or shocking to them, one of the key criteria for concluding that there may be an undue adverse impact from the project.

This area and region are considered to be highly scenic. The Interstate corridor itself, while developed along the Winooski River corridor in this area, affords outstanding views of the surrounding valley and mountain landscapes and carries commuter, commercial and tourist traffic, (with an AADT (Average Annual Daily Traffic) of 27,200 at the Waterbury Exit) as does Route 100 (with an AADT of 10,900 at Moscow Road). The Interstate has been identified as an unofficial scenic highway (and was the subject recently of a proposed scenic byway study and designation, which has yet to go forward). The same can also be said of Vermont Route 100, which has been featured in magazines (Kostyal, K.M. "Vermont's Route 100." National Geographic Traveler Magazine January/February 1993: 68-77.) and tour guides as perhaps Vermont's most scenic highway. This road serves as a gateway to many of the state's and this region's most visited recreational and tourism destinations, including Ben & Jerry's headquarters, the state parks around the reservoir, the village of Stowe, Stowe Mountain Resort and the Smugglers Notch State Park and scenic highway. This highway also has been considered for possible designation as a Vermont Scenic Byway (Green Mountain Crossroads, an application for portions of Routes 100, 100B, 108 and 17, June, 1995). Route 100B in the project area, located in Middlesex and Moretown is under current consideration for such designation.

The backdrop of hills, the highest and some of the highest summits in Vermont in the Green Mountains and Worcester Range, the presence of open lands and river/stream courses, coupled with historic villages, homes and settled landscapes all combine to make the entire project area an important aesthetic resource for residents, visitors and recreationists and thus highly sensitive to change and visual impact. Evidence of the historic and celebrated landscape qualities of the region can be understood by citing passages in an important guide, Vermont: A Guide to the Green Mountain State, first written in the 1930's as part of the Federal Writer's project and then updated by Ray Bearse in the 1960's:

" Waterbury...stretches along an intervalle made by the Winooski in a southward bend, its beauty of setting intensified by the deep cleft to the north between the Worcester Mountains and highest elevations of the main Green Mountain Range.

Waterbury Center, a rapidly growing settlement with many new houses overlooks the lovely lake formed by the Waterbury Flood Control Dam. Boating, fishing, water skiing, and swimming are the main recreational features (and) Vt. 100 twists along a narrow valley with hills to the east rising towards the Worcester Range.

Moscow, [in Stowe], is a small settlement 0.5m west of Vt. 100. There are a few houses, general store and post office. Moscow is said to have been named at a school meeting in 1839. Someone hit a large saw blade and the sound was believed by someone present to have resembled church bells in Moscow, Russia!"(1)

Reference:

(1) Bearse, Ray, ed., Vermont: A Guide to the Green Mountain State 3rd ed. Boston, MA: Houghton Mifflin Company, 1968.

Based on the review of this entire proposed upgrade within the landscape context, it can be concluded that a number of important aesthetic and environmental qualities will be affected by the proposed construction. The impacts will accrue from the additional visibility of the proposed new lines and structures, which will be higher and of a larger scale, the placement of the new corridor in Duxbury, the required clearing and loss of vegetative screening, the addition of a second line, and the proposed designs of crossings at Route 89 and the Winooski River as well as at the Waterbury Reservoir. The proximity to and visibility of the line to numerous neighborhoods and residences also creates a sensitive situation with regard to aesthetic impacts.

One (1) historic property in Duxbury, 10 in Waterbury, and 3 in Stowe, as well as the Lower Village historic district may be affected by this project, as indicated in VELCO Exhibit HHH-2. That review has omitted any reference to the historic qualities and attributes of the Waterbury Reservoir and surrounding public investments, some of which date to the Civilian Conservation Corps activities in Vermont during the 1930's. The original dam itself was constructed in 1927 and this is an important consideration given the current and historic use of the state forest, the reservoir and the surrounding state park areas.

The four affected communities each have addressed aesthetics and to a lesser extent utilities within their community planning documents and while these references (and other documents provided by local governing or planning bodies) may not constitute a distinct and measurable community standard they do provide a point of departure for understanding community sentiment with regard to impacts to visual and natural resources as well as settlement areas. It is also of note that Stowe's sensitivity to aesthetic impacts is reinforced by the town's adoption of hillside and ridgeline regulations for same, and that the Town of Waterbury is currently engaged in a process leading to the potential adoption of a similar overlay district ordinance.

Overall, the region is one which often contains long distant views with the classic Vermont pastoral qualities and mountain backdrops. As an area that is visited by tourists and relies on this economy, and as a region with a rich culture and historic settlement patterns, the potential exists for undue, adverse impacts from this project absent appropriate mitigation.

Throughout the project area there are numerous road crossings and sections which parallel what are considered to be some scenic roads and viewsheds. There are also locally sensitive open spaces and land uses. These are considered to be aesthetically sensitive areas and are addressed in detail in the section by section analysis. Areas of high aesthetic sensitivity with a potential for undue adverse impact are identified in the next section of this report. The Regional Context Analysis Maps provide an overview of the project corridor and environs.

We note that this report addresses the impact of the project as currently proposed, including any mitigation measures that VELCO has identified to date. We understand that VELCO has indicated it is willing to undertake additional, albeit unspecified, mitigation measures. In addition, a limitation on the analysis is that final design plans showing such items as pole placement are not available presently.

## Project Description

The word “context” is derived from its Latin root “contexere”, which means literally “to weave together.” The task at hand is to weave together associated elements of the proposed transmission line and existing transmission lines, as well as the substations, successfully and without unacceptable impacts into their surroundings. In areas with little visibility and where screening and tree heights reduce or eliminate the sense of its presence, some degree of integration can be achieved. In other areas this may not be possible, and a range of mitigation options will be necessary to avoid an undue, adverse impact.

The project as being proposed by the petitioners includes:

- 1) A substation expansion/upgrade at the existing Middlesex Substation in Moretown, VT;
- 2) A .33 mile connecting tap at the southern end of the proposed single 115kV line in Duxbury as it leaves the existing VELCO K24 115kV line to a proposed switching station southwest of River Road;
- 3) The beginning at mile 0.0 of a new right of way, which crosses River Road, the Winooski River and existing railroad tracks to where it joins the existing GMP 3347 34.5 kV line to cross Route 2 and Interstate 89, and up the southern flanks of Blush Hill, to include H frame construction in this area and the removal of a short span of the existing GMP line from the Harvey Property;
- 4) The continuation of the proposed 115kV as it is colocated with the existing GMP 3347 34.5 kV line (which will be upgraded with new poles and reconductoring), which crosses Blush Hill Road to the east at approximately mile 1.1 and then parallels Blush Hill Road (700 feet to the east of the road as per Boyle-Portz-3, p.34) for over 2 miles to where it crosses back over Blush Hill Road to the northwest at mile 3.3;
- 5) The crossing of the Waterbury Reservoir from approximately mile 3.5 to 3.9, which will include four (4) new H frame towers at higher elevations to carry both the existing rebuilt 34.5kV and the proposed 115kV line across the Waterbury Reservoir;
- 6) The ascent of both lines up Gregg Hill and through the Mt. Mansfield State Forest with the 34.5 kV line to the west of 115kV line and in single pole configurations, which first run to the east of Gregg Hill Road and then crosses Gregg Hill Road diagonally at mile 5.7, at which point it then roughly parallels Gregg Hill Road about 300 feet to the west (Boyle-Portz-3, p.42) until Gregg Hill descends to its intersection with Route 100;
- 7) The continuation of the route into Stowe at approximately mile 6.6, where it parallels Route 100 anywhere from 30 to 90 feet above the highway and at a minimum 300 feet to the west;
- 8) The descent of the line to where it crosses Moscow Road and the Little

River and Nichols Field and past the existing Moscow substation, which will be removed;

9) The continuation of the corridor in the GMP right of way and both lines to where they join the 34.5kV Mountain Line at mile 8.35 (Boyle-Portz-3, p.9), at which point a double circuit 34.5kV line will be constructed and will continue with the proposed 115kV line (which will be east of the 34.5kV lines); and

10) The termination of the project at the proposed new Stowe substation at the site of the existing Stowe Electric Wilkins substation at mile 9.4.

For a sense of size and scale of the proposed structures, see DPS-DR-2. For overall locations of the project refer to the Section-by-Section analysis contained in this report as well as to DPS-DR-4 (overall map) and DPS-DR-7 and DPS-DR-8 (Waterbury Viewshed Maps), as well as the large scale aerial photograph submitted as part VELCO exhibit Volume II and titled and dated "VELCO's Greater Lamoille County 115kV Project, 12/06/04."

## The Quechee Standard and Analysis

As with the recent proceedings for the VELCO Northwest Reliability Project, the Quechee criterion applies to the aesthetic review and assessment of the proposed Lamoille County Project.

The Quechee Standard was established by the Vermont Environmental Board under the Findings of Fact and Conclusions of Law in the Quechee Lakes case (Re: Quechee Lakes Corp. #3WO411-EB and #3WO439-EB) decided in 1985. This standard has been adopted by the Public Service Board for reviewing aesthetic impacts associated with petitions submitted under the provisions of Section 248.

The Quechee analysis requires a two step process which begins with the key question: Will the proposed project be in harmony with its surroundings, that is, will it fit with the context within which it is located? To ascertain this, the applicant has to address 1) the nature of the project's surroundings, 2) the compatibility of the project's design with those surroundings, 3) the suitability of the colors and materials used for the project, 4) the visibility of the project, where it can be seen from, the duration of the view and whether the view will be a foreground, mid-ground or background view and 5) the impact of the project on open space.

If, upon weighing these factors together it is determined that the project does not fit successfully with its surroundings, the project can be considered to have an adverse impact if constructed. This determination then requires the second step of the analysis to ascertain whether or not it will have an undue, adverse impact on aesthetics or the scenic or natural beauty of the area. This is accomplished answering the following three questions:

- 1) Does the project violate a clear written community standard intended to preserve the aesthetics or scenic, natural beauty of the area?
- 2) Does the project offend the sensibilities of the average person?
- 3) Has the applicant failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed project with its surroundings?

If a positive conclusion is reached with regard to any of these criteria, then the project will have an undue adverse effect on aesthetics.

It should be noted here that other factors will be weighed in the Board's review, most notably reliability issues and the cost benefit determination with regard to mitigation measures. The Vermont Public Service Board, in

Docket 6793, the Petition of the Stowe Electric Department, found that “the Board’s assessment of whether a particular project will have an “undue” adverse effect based on these three standards will be significantly informed by the overall societal benefits of the project” (page 12 in the Order by the Public Service Board dated May 5, 2003.)

### Introduction

This report concludes that a majority of the LCP 115kV project as proposed will have an adverse impact on aesthetics. The combination of an additional new structure, up to two times higher than current structures in the region, the proximity to residences, the crossing of the open lands and the Interstate, as well as the crossing of the Waterbury Reservoir, all represent adverse impacts. Adverse is derived from the Middle English and Latin word advers(us), which meant hostile. A current and appropriate set of definitions includes 1) “antagonistic in purpose”, 2) “opposing one’s interests or desire”, or 3) “acting in a contrary direction”(1). The proposed construction of the transmission line upgrades at the Waterbury Reservoir includes:

- higher and more visible structures
- the addition of a totally new line with its attendant elements
- the loss of mature vegetation which would help to screen the line, and
- the highly visible crossing over the water.

Taken together, this proposed construction is in conflict with the overall interests of individuals and the public who have historically voiced their desire to maintain, if not enhance, Vermont’s special scenic and aesthetic qualities. That desire is even more pronounced today as threats to these qualities mount.

Reference:

(1) Random House Dictionary of English Language Unabridged, New York, 1966.

The Overview of Individual Sections highlights those areas that will experience an adverse impact if the LCP is constructed as proposed. It may be desirable to mitigate those adverse impacts but the charge of this report is to address those areas which could experience an undue adverse impact on aesthetics if the project is constructed. Thus, this section focuses only on those areas in the Overview of Individual Sections, which in our opinion, if this project is constructed, could result in an undue, adverse impact, due to the fact that 1) it either will offend the sensibilities of the average person or 2) sufficient and generally available mitigation measures, which a reasonable person would take, have not been proposed by VELCO. In our opinion, other areas will not experience an undue adverse impact on aesthetics as a result of the LCP. In addition, the issue of compliance with community standards is addressed in the section entitled Survey of Regional and Town Plan.

Note that in a number of locations along the proposed LCP route, the potential exists for an undue, adverse impact on aesthetics if the project is constructed as proposed by VELCO. It is difficult, in some instances, to assess VELCO's proposed mitigation recommendations insofar as they are A) non-specific; i.e. the mitigation measure "selective clearing and vegetative management" does not provide sufficient detail to ascertain the efficacy of this method, or B) incomplete; i.e. specific planting plans, numbers and sizes have not been provided so as to understand how the measure will address the impact satisfactorily.

There are some areas along this section of the corridor where placing the lines underground will satisfy the standards of Quechee and eliminate any undue adverse impacts on aesthetics. These options, except in one instance, are not included in this report; the reasons for not considering the underground option in a number of other locations include:

- 1) The cost of undergrounding
- 2) Reliability issues associated with undergrounding
- 3) Potential for other environmental impacts if this option were to be considered.

In the one instance where undergrounding is proposed, this report and review concludes that from a purely aesthetic perspective the cost is outweighed by the benefits. Mitigation measures are proposed only for those locations described in this summary section. In our opinion these measures will satisfy the Quechee standard and prevent an undue adverse impact to aesthetics. VELCO will need to respond to these recommendations with more detailed mitigation measures designed specifically for the areas delineated. Planting plans with plant materials of sufficient size and number, as well as pole placements and other measures will need to be part of this next step to ensure that an undue adverse impact will not result from this project. Single pole structures are recommended in several places. These structures are described in the testimony of Department witness George Smith.

### **From The Duxbury Tap to Mile 0.5**

Duxbury Tap and Crossett Hill to the Interstate 89 Crossing and Blush Hill

This is perhaps one of the more challenging areas for this project, and while some improvements are proposed, such as the removal of a short length of the existing GMP 34.5kV line, the net result will be a degradation of this highly visible landscape, particularly with the new cut being proposed on the flank of Crossett Hill.

## Mitigation Recommendations for Areas of Highest Aesthetic Sensitivity

### Lamoille County Project 115kV Line and Substation Upgrades

DPS-DR-1

This is a scenic area as identified in the Duxbury Town Plan (page 46) and is frequented by outdoor recreation enthusiasts, particularly along River Road where local residents and staff from ANR across the river frequently and regularly walk, jog or bike ride. There is high visibility of this section as well from the Interstate (although speed and orientation limit this to some extent) and certainly from River Road as well as North Main Street/Route 2 in Waterbury.

There are also the open meadows and historic agricultural uses and architecture associated with the historic Atherton Harvey Farm, and while the residence itself faces away from the corridor, the active outdoor areas associated with the horse farm and barn will be very much in the “shadow” and full view of the proposed H frames and conductors. The Boyle-Portz-3 Exhibit 2C-1 only provides a selective view of this proposal without seeing the full impact that this will have to viewers, particularly those who will have views of long duration along River Road as they walk or jog.

The clearing for the new line will be as wide as 175’ over the .33 mile distance of the Duxbury tap to the switching station at Mile 0.0, and this will significantly alter the intact wooded lower hillside of the north end of Crossett Hill. While H frame structures may reduce the height of the poles, the bulk and mass and consequent presence of utility infrastructure will be readily noticeable and will increase the potential visual impact. The clearing and pole placements from the “Tap” across the open fields and river to the point adjacent to Route 2/North Main Street, as well as along the Interstate, will be significantly larger and higher (in some instances two times higher) than existing pole heights of 35 to 40 feet.

These proposed changes will definitely result in an adverse impact and have the potential to be undue because 1) local residents and visitors to the area may potentially be shocked or offended by the dramatic changes on Crossett Hill, in particular, and 2) while VELCO cites a corridor realignment as a mitigation measure, there are no specifics with regard to the extent of the visual impact, which will accrue from the required clearing (and a substantial amount of vegetation may be/will be removed along River Road in particular (see VELCO Exhibit RCJ -24 2/2 in particular) and insufficient details have been provided with regard to clearing and planting. Thus, there is no guarantee that all reasonable measures have been taken.

### Mitigation Recommendations

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

- 1) Due consideration should be given to exploring a connection to the existing VELCO K24 line further to the west, than is proposed in the VELCO alignment to follow the contour in an easterly manner to where it would turn to cross River Road. This corridor will need to be carefully located above existing properties along River Road and to provide sufficient buffer and screening from the road and backgrounding above. The lowest possible single pole construction is recommended, except where higher structures reduce clearing widths. This will result in a less visible clearcut down the slope and continues the contouring approach that is present with the existing line, descending to where it would turn to cross River Road. This area will still need to be carefully revegetated along with as much existing vegetation that can be retained;
- 2) Employment of the single pole configuration options as proposed in George Smith's Testimony for DPS to limit height and visibility of the line and its structures as it crosses the open areas and the highways to Blush Hill. Poles need to be set back as far as feasible from road crossings to minimize their visibility head on to drivers or within their distinct cone of vision;
- 3) Detailed plans for clearing and retention of existing screen vegetation; and,
- 4) Detailed plans for developing effective "vegetative plugs" and street tree plantings and screen plantings along River Road, North Main Street and even along the Interstate, particularly as the corridor ascends Blush Hill. Unusual steps may be need to retain existing vegetation in this location in particular.

#### Mitigation Alternative 1)

While it is not a consideration at this point, one alternative might be to explore following a route along an existing transmission corridor and right of way known as the Little River route/GMP line 3312. This route, although difficult for construction and possibly challenging due to environmental constraints, would have the added benefit of avoiding all the residential development and consequent impacts along the Blush Hill section of the corridor.

### Blush Hill Section Mile .8 to Mile 2

Note: In this section where there is extensive residential development in proximity to the corridor, the lack of detailed plans for clearing and planting offers no assurance that the project will be effectively mitigated with the reasonable means available. There is no question that the characteristics of the proposed upgrade represent an adverse impact, a change that increases the presence of the utility corridor and the scale of that presence in the landscape, resulting in an adverse effect. Thus, it must be concluded that an adverse, undue impact is possible without more extensive plans for mitigation, which are reasonable and available. The mitigation recommendations cite these measures.

At the point at which the right of way emerges from the wooded corridor at .7 to .8 miles, the route then heads easterly to cross Blush Hill Road at which point it turns in a northerly direction to follow the road 500 to 600 feet to the east of that road. Up to mile 2.0 the corridor traverses open areas with residences, and then in and out of wooded patches. This area is sensitive aesthetically due to its residential population and proximity to the corridor, although the presence of the radio towers and the development pattern itself undermines some of the aesthetic values in this stretch. Views across the valley to the west are also an issue and further study is required to conclude definitively that the widened corridor and large poles do not create the appearance of a swath from a distance, when looking east to west. The line is close to several residences in a number of locations and in this area the increase in the corridor width and structure height of the single 115kV structure will potentially be shocking and offensive to the average person when viewing a before and after picture of both the new tower and resultant clearing. The increased height of 20' to 25' minimum over the existing poles is also a contributing factor. The lines and poles at the road crossings at Blush Hill and within several of the developments are currently readily visible.

At the Blush Hill crossing, the relocation of the poles away from the road has been recommended and this is one positive mitigation measure.

### Mitigation Recommendations

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

- 1) Poles need to be set back from road crossings and properly screened with sufficient numbers of native plant associations;

- 2) Careful pole placement to avoid conflict and structure visibility close in to residences. Minimal clearing and vegetative retention details must be provided to provide the assurance that the available mitigation measures have been utilized to their fullest extent possible;
- 3) Pole heights and distances must be revisited in the context of local visibility so as to remove them from the view of the traveling public and/or residences, which will be impacted; and,
- 4) Selected street tree plantings are required in the vicinity of corridor miles 1.2 to 1.4 to minimize views from Blush Hill Road

#### **Blush Hill Section Mile 2 to Mile 2.8**

The route in this area parallels Blush Hill Road, where outstanding views to the east and the Worcester Range are accessible. It is a highly scenic area and needs special attention to protect the views. The area is also open and therefore affords less backgrounding and buffering with other vegetation and built elements. There are several historic properties whose view, like most of the other residences along Blush Hill, is to the east and therefore the proposed upgrade is present almost in the foreground of those views. This is a highly sensitive aesthetic area due to the accessible views from the road and residences and because of that fact, this area is visible from areas on the east side of Waterbury. An undue adverse impact on aesthetics is possible from this project as proposed and reasonable mitigation measures are available, which have not been utilized to the fullest extent possible or desirable.

#### **Mitigation Recommendations**

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

- 1) The line needs to be rerouted as proposed, starting at mile 2.0/2.1 but further to the east than proposed by VELCO consultants, behind an intervening treeline at mile 2.2 and continuing north north easterly to the east of the Blush Hill Estates and then angling northwesterly to where it rejoins the current corridor at mile 2.8. (See Exhibit DPS-DR-6 Proposed Aerial Reroute Map, which shows the proposed route).

This routing will take the route below the line of sight and reduce their visibility and consequent impact in the landscape (See Exhibit DPS-DR-5 Line of Sight Section); and,

2) The lowest single pole structures need to be used, as the H-frame structures are more visible across the landscape and the single poles create a more uniform appearance, with less mass or elements visible in the landscape.

Mitigation Alternative 1) for the entire Blush Hill Section:

To avoid the impacts along the entire Blush Hill route to the point where the Little River line joins this line at mile 3.6, an alternative would be to explore following a route along an existing transmission corridor and right of way known as the Little River route/GMP line 3312. This route, although difficult for construction and possibly challenging due to environmental constraints, would have the added benefit of avoiding all the residential development and consequent impacts along the Blush Hill section of the corridor.

### **Mile 3.5 to 4.0 The Waterbury Reservoir**

#### **Overview**

Perhaps the most scenic and public area impacted by the proposed LCP 115kV project is where the existing corridor and proposed upgrade crosses through the Mt. Mansfield State Forest and the Waterbury Reservoir and environs. The importance of this public investment warrants a special section devoted to the assessment of the aesthetic and visual impact of the proposed LCP corridor and associated elements slated for upgrade and construction. The existing and proposed conductors and associated structures and elements (such as the marker balls on the conductors) where they cross the Reservoir will be visible from the Waterbury Center State Park, the Little River State Park, the Blush Hill Access and a large area of the Reservoir and shoreline. There has been a ROW agreement with the State regarding the historic presence of the corridor throughout this area. The State of Vermont owns almost the entire shoreline of the Reservoir, which is an 839 acre waterbody.

The original Waterbury Reservoir Dam, built after the 1927 flood, also has historical value, along with sites in the Mansfield State Forest and at the Little River State Park, as part of the legacy of the work of Civilian Conservation Corps in Vermont. The Mt. Mansfield State Forest, at over 34,000 acres in size, is one of the most significant state land holdings due to its location in the heart of the Green Mountains and with the major waterbody and Mt. Mansfield as two of its most popular public destinations. Substantial portions of the state forest surround the Reservoir. The facilities include 100 campsites, a swimming beach, boat and canoe launches in 5 dif-

ferent locations, including “drag-in” launches at the Blush Hill Road site and at the Little River Delta. Three “back-in” launches exist at the State Park, at the dam and at the Waterbury Center Day Use Area. A number of dispersed camping, fishing, and swimming sites occur around the perimeter of the Reservoir, most accessible by foot or boat, some by car. There is a hiking trail network in the State Park and Vermont Association of Snow Travelers (VAST) trail system runs through the state park and is used for hiking, snowmobiling, biking and hunting. Additionally, two areas are designated for 5 mph/no wake zones and there are two slalom ski courses, as this water-body is very popular for this type of use. Seaplanes are also known to land in portions of the lake.

A 1996 Memorandum prepared by the Agency of Natural Resources, Lakes and Ponds Section, provides some insights into the value of this resource:

“At 839 acres, Waterbury Reservoir is one of the ten largest bodies of water located wholly within Vermont. It is located close to the Barre/Montpelier/Waterbury population centers and the Stowe/Mad River Valley recreation centers. With the developed access areas and recreation facilities that exist on the Reservoir, it is exposed to a potential of 60,000 visitors annually. Its undeveloped shoreline further enhances its attraction for most recreational uses. There are no other lakes in the vicinity of the Waterbury Reservoir. ...Due to the above factors, Waterbury Reservoir receives a significant amount of use by anglers, motor boaters and ‘quiet users’.” (1)

The Agency has provided figures on the Reservoir. In summary:

The Waterbury Reservoir is one of Vermont’s most important and most used day use areas. The normal rate of recreational day users is more pronounced on the reservoir than elsewhere in the state, with even higher intensities on the weekends. A main reason for the increased day use of the reservoir is due to the lack of shoreline camps and residences, which increase the numbers of “transient” recreational uses on weekends or holidays at public day use areas. Having no shoreline development also enhances the wildlife in and around the reservoir and also the natural resource value. Normal use of the reservoir includes fishing, swimming, primitive and recreational camping, hunting, boating, waterskiing, operation of personal watercraft, canoeing and the enjoyment of the wildlife. Motorboats commonly run at low and high speeds with the majority of engines being above 7.5 horsepower. A tour boat company also has daily tours on the reservoir.

In the Waterbury Center State Park from 1990-1999 there was an average of 20,471 users per year, with a high in 1999 of 23,413. In 2000, the reservoir was drained for maintenance and the number of day users dropped drastically to a ten year low of only 5,821. The few lakes in the surrounding area were overwhelmed with boat traffic during this period, having to take on the job left behind by the reservoir. Since 2000, no survey has been done on day use of the reservoir, but people have found alternative uses since the reservoir was drained, such as mountain biking and motor cross. However, none of them can compare to the amount of boat traffic when the reservoir is full. The Reservoir is proposed to be refilled sometime in 2005.

Little River State Park offers access to camping and all day uses of the reservoir. From 1962 through 2003, the average number of users was 25,512, with a high of 53,413 in 1988 and a low of 3,280 in 1962. The average number of campers during the same period was 21,948, with a high of 33,920 in 1988. Day users during this period averaged 3,564, with a high of 31,120 in 1988. Day use by boats is by far the most common activity partaken by users at the reservoir. A boat survey was conducted in 1993 inventorying all boat use on the reservoir. During late July and early August, the time between 12:00pm and 4:00pm saw the most intense use. During this time up to 110 boats of all kinds were on the lake at one time. The majority of these boats were motorized and underway, numbering in the 30's. Non-motor-boats numbered in the teens and consisted mainly of canoes.

(Information obtained from Susan Bulmer, Parks Regional Manager, and the 1993 Waterbury Reservoir Boat Census)

In a letter dated July 16, 2004, from Jonathon Wood, Commissioner of Vermont's Department of Forests, Parks and Recreation, to Kim Moulton of VELCO (VELCO Exhibit KSM-5), the Commissioner cites ANR policy with regard to utility easements, which highlights the constraints on granting such easements and the rationale. As stated in the letter, utility easements "can have an impact on the more natural environment, pre-empt other uses of the corridor, and be aesthetically displeasing to many." The Mt. Mansfield State Forest Long Range Management Plan, adopted in 2002 with extensive public input, includes an assessment of "the many important natural and recreational resources" in the Forest, and as the Commissioner concludes in the letter, the "development of a power line through these areas would clearly be an incompatible use and would be contrary to how the public expects these resources to be managed."

The Waterbury Reservoir and surrounding forest and park lands afford some of the most engaging scenery and outstanding recreational experiences in the State of Vermont through the combination of numerous access points, park facilities, trails, and with a variety of water sports opportunities and watercraft use. The user numbers, the visual environment and recreational infrastructure, the Forest Management Plan and ANR policy, thus all support the conclusion that further utility corridor development is not desirable and upgrades, which degrade the aesthetic environment and undermine the user's experience, are not acceptable or appropriate. The Reservoir and state lands that surround it represent a highly sensitive aesthetic environment of significance to the local communities, region, state and visitors from all over the world.

At the same time that the residential development has crept up to and developed around sections of the existing corridor and proposed line construction, the importance and the value of this recreational resource has only increased with the regional population and the development and promotion of tourism.

### **The Nature of the Proposal and the Impact**

As part of the LCP, VELCO proposes to widen the lakeshore clearings an additional 100 feet to accommodate the new towers. The existing 52 and 57.4 foot high H frames will now be replaced by two structures, 70 feet and 101-1/2 feet high. The doubling of conductors and ground wires, along with marker balls that are placed on the wires for visibility, adds to the impact.

The proposed upgrade will significantly degrade the users experience from the water and the environs of the crossing with the towers 1-1/3 times and 2 times the size of the existing single tower construction. This fact, coupled with the increased visibility of the towers above the surrounding vegetation, and the clearing proposed/required to place the side by side "H" frame structures on both sides, will shock or offend the many boaters and shoreline users of the reservoir. The view from the Waterbury Center State Park Day Use area, albeit at the more developed end of the Reservoir, will be of a midground with the 6 conductors and grounding wires, the marker balls on the conductors and the 12 towers above the treeline, and will greatly compromise the distant views beyond, which are of an undeveloped natural forest and mountain landscape. This proposed upgrade more than doubles the visual presence of what is there presently due, in part, to the increased height and the increased clearing. See Exhibit DPS-DR-10 and Exhibit DPS-DR-11 for visual simulations, which provide a sense of the untenable

nature of the impacts if the project is built as proposed.

There is also an extremely long duration of view for visitors to the day use area and for boaters, particularly those that are sailing or under their own power, adding to the nature of the impact. The results of the proposed project would create an impact that definitely “would be contrary to how the public expects these resources to be managed.”

The experience from the Blush Hill Access will also be greatly compromised by the increase in the corridor cut or opening and the loss of mature trees, which currently screen the visitor from the towers on the Blush Hill side. Water recreationists will also experience a greatly increased clearing and visual impact as they travel in the vicinity of the corridor, the visibility of which will be significantly increased from the water with a “cone “ of visibility radiating from both shorelines, not just an “inline” view as stated in Exhibit Boyle-Portz-3, page 40. Existing vegetation will not provide background for the higher structures, which will now be skylined above the 60’ high surrounding vegetation (height estimated in Exhibit Boyle-Portz-3, p.40), especially when viewed from the water level and the day use area. See Exhibit DPS-DR-7 and Exhibit DPS-DR-8 for potential viewshed maps delineating the expected area of visual impact.

Another factor that must be included is the fact that once the Reservoir is refilled, many users, as well new users who have not visited the Reservoir due to its drawn-down water level, will now be returning or coming to the parks and forest and water which is part of this recreational destination. They will be not only surprised, but shocked at the change which has occurred in the interim if the line and towers are to be constructed as proposed. These views will not be distant- rather they are up close for boaters, visitors to the Blush Hill access area, and for those visiting the day use area and boat launch at Waterbury Center State Park, from 2500 to 4000 feet from the crossing.

### Mitigation Options

Based on this analysis and assessment of existing and proposed conditions, it must be concluded that not only will the visual impact be adverse, it will be undue. The VELCO mitigation measures of selective clearing and vegetation management and reduced pole heights (VELCO Exhibit Volume III) are insufficient. In fact, there exist only two possible ways to mitigate this proposed corridor and the associated physical elements at this Waterbury Reservoir crossing. Additional plantings for screening would have minimal effect on the visual impact, and selective clearing will not change the appear-

ance of the towers above the treeline and from the water, or alter the view of the minimum 1,400 foot long span of conductors across the waterbody.

1. Developing and/or exploring alternative routes through or around the Reservoir, State Forest and State Park area would have the concomitant result of creating new impacts where there are none (with the exception of the Little River alternative south of the Reservoir- but this routing still would bring the new line and upgrade to the same point on the reservoir). It is our understanding that ANR is reluctant to approve this crossing. This could create an undesirable precedent and pose the potential for serious environmental impacts, as well as an undesirable precedent. Topography and the presence of natural communities and habitat would also constitute a serious and insurmountable impediment. Furthermore, the policies and Management Plan cited in the previous section would potentially preclude any further development of utility rights of way through the forest, and it has been determined that legislative approval would be necessary for any such action to be considered. (Letter dated November 1, 2004 from Meghan Purvee, General Counsel Forests, Parks and Recreation, to Richard C. Marron, Vermont State Representative from Stowe.) Therefore this option is not viable.

2. The only other option available to avoid an undue adverse impact from this project as proposed is to bury the lines at either side of the Reservoir and then run the line under the water at the reservoir bottom. The PV-20 line provides an applicable precedent for this approach and the benefits which accrue from such a mitigation measure will be priceless, and benefit not only current users, but also future generations of Vermonters and visitors to the state (See DPS-DR-11 and DPS-DR-14). Final locations for the beginning and ending of the undergrounding and the associated transition structures/components will have to be determined with more detailed investigation, but it is recommended that these locations be selected so as to eliminate any visibility of the corridor, lines and structures from the surrounding shoreline and reservoir surface. The initial estimate of start and end points along with distance is as follows:  
From existing pole 57 to existing pole 60, for a total length of .5 miles or less with a little over 1/4 mile to be under water.

3. Refer to the testimony of George Smith, the DPS witness and consultant, for the possible cost of undergrounding at this location. In the NRP case, Docket 6860, it was stated that undergrounding of a 115kV line does not have the same reliability issues as that of a 345kV line, and therefore is more feasible.

### References:

- (1) Garrison, Virginia (Supervisor, Lake and Ponds Section). Memorandum to the Vermont Water Resources Board. 4 Sep. 1996.
- (2) Gomez and Sullivan Engineers, P.C. Initial Consultation for Waterbury Hydroelectric Project FERC No. 2090. Aug. 1997

### Miles 4.0 to mile 5.7 Gregg Hill Area

At the point at which the transmission corridor emerges from the State Forest to cross and then parallel Gregg Hill Road, it proceeds northerly and traverses near a cluster of homes (mile 4.1 to 4.3) as it crosses again. At that point it parallels the road until it enters a wooded area at mile 5.0. This area is scenic and has a rural feel of woodlands and open pastures, treelines and hedgerows, which will be adversely impacted by the presence of the two lines and with new poles at a minimum approximately 10 to 20 feet higher than at present. This factor and the proposed increased clearing and removal of mature trees and screening trees, which currently deemphasize the corridor, will shock the average person and necessitate sufficient mitigation measures. The existing vegetation is very important to the mitigation of the aesthetic impacts and visible presence of the 34.5kV line as it exists today. Thus, retention of and additions to this vegetation become even more important with the proposed upgrades. At mile 5.0 the corridor is mitigated by its route through a wooded area, and again at mile 5.4 to 5.7 the corridor becomes more visible with a greater potential for impact if the line's impact is not reduced. At mile 5.7 the corridor heads up hill to the northwest and becomes less visible and topography helps to separate it from the roadside view. Limited clearing and lower pole heights are desirable in these locations. There are reasonable and available mitigation measures, which have not been presented by VELCO but which can avoid an undue adverse impact.

### Mitigation Recommendations

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

- 1) Employment of the single pole configuration options as proposed in George Smith's Testimony for DPS to limit height and visibility of the line and its structures as it crosses the open and settled areas, either in front of or behind the homes;

- 2) Poles need to be set back as far as feasible from the Gregg Hill Road crossing at mile 5.7 to minimize their visibility and vegetative plugs employed here as well; and,
- 3) A detailed plan for screen planting and buffering for all impacted residences, along with careful delineation of existing screen and buffer vegetation and how to protect/retain existing and important wooded areas and individual trees.

### **Mile 6.8 to Mile 7.7 in the Town of Stowe**

The Town of Stowe Planning Commission has weighed in on this portion of the project and in a Memo dated January 25, 2005, from Paul E. Percy, Chair of the Stowe Planning Commission to Dick Marron, Chair and Member of the Stowe Selectboard, it is recommended “that a single 115kV line with taller structures with proper right-of-way management would be less expensive and have less impact on property owners.” In a letter from Mr. Percy to Susan Hudson, Clerk of the Vermont Public Service Board dated July 12, 2004, he states: “The Town of Stowe has serious concerns about the adverse impact of the powerline on individual property owners and the visual impact of the line as viewed from the Route 100 corridor.” Stowe Planner, Tom Jackman, indicated in a phone conversation on April 1, 2005, that there is support for single pole construction, especially in the Moscow Road, Little River Crossing area, and that roadside/street trees on Route 100 and Moscow Road would also be desirable as a mitigation measure for the line in this section.

The corridor in this section comes exceedingly close to residences and access roads in the Black Bear Run Development and in the vicinity of Marshall Road. Through this area the line and corridor are immediately next to or in very close proximity to a number of residences and neighborhood roads. Mature vegetation currently screens or buffers those residences, and the size and scale of the current 34.5kV poles are less intrusive in the landscape although located in highly visible areas and do not contribute, but rather detract from the landscape and neighborhood character. There is one location where the two poles will straddle a driveway in the Black Bear Run development. Thus, with the higher poles in this area (as high as 65’, 70’ and 79’) and the two lines being proposed, and the insufficient mitigation measures being offered, there is no question that this project will have the potential for an undue adverse impact along this stretch of the route (See visual simulations of existing conditions and VELCO’s proposed line placement in Exhibits DPS-DR-15 and DPS-DR-16).

In this section, as with the Blush Hill location, where there is extensive residential development in proximity to the corridor, the lack of detailed plans for clearing and planting plans offer no assurance that the project will be effectively mitigated with the reasonable means available. There is no question that the characteristics of the proposed upgrade represent an adverse impact, a change that increases the presence of the utility corridor, and the scale of that presence in the landscape, resulting in an adverse effect. The extensive removal of mature trees and the poles twice the height of the existing poles along with the second set of 34.5kV structures will offend those who experience a before and after view of the change. Thus, it must be concluded that an adverse, undue impact is possible without more extensive plans for mitigation, which are reasonable and available. The mitigation recommendations cite these measures.

### Mitigation Recommendations

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

- 1) Employment of the single pole configuration options as proposed in George Smith's Testimony for DPS to limit height and visibility of the line and its structures as it crosses the open and settled areas, either in front of or behind the homes;
- 2) Poles need to be set back from road crossings and properly screened with sufficient numbers of native plant associations. This will be particularly important at the Black Bear Run pond site, where street tree plantings will also be desirable to deemphasize the line's presence. VELCO's consultant has recommended pole relocation in this area and that is one appropriate step;
- 3) Careful pole placement to avoid conflict and structure visibility close to residences. Minimal clearing and vegetative retention details must be provided to assure that the available mitigation measures have been utilized to their fullest extent reasonably possible;
- 4) Pole heights and distances must be revisited in the context of local visibility so as to remove from the view of the traveling public and/or residences which will be impacted;
- 5) Roadside trees or street tree plantings along Route 100 as it parallels the line at mile 7.5 to mile 7.7 will be necessary to screen or buffer the route from the traveling public along Route 100;

- 6) Details of mitigation plantings at the residences; and,
- 7) Detailed plans for existing vegetation and what will be retained, as well as proposed new plantings to buffer and screen the line and poles in the open area.

As an alternative mitigation measure, and only if possible, some rerouting to the west to avoid conflicts with residences, may be desirable and should be explored

### **Mile 7.7 to Mile 8.2 Moscow Road, The Little River and Nichols Field**

This is a highly visible and well-traveled area that has been highlighted as aesthetically sensitive due to its location, the use of the Little River for fishing and swimming, and the presence of a public investment in the Nichols Field preserved lands. The traffic on Route 100 and Moscow Road will have specific views of this area. The Little River itself is picturesque and represents an important natural feature in this area. The Section-by-Section analysis and photography included in this report provides a sense of the landscape and the potential impacts to it from the upgrade proposal. In addition Boyle-Portz-3 Exhibits 4-C1 through 4-C4 portray existing conditions and simulations. The simulations are particularly helpful in assessing the potential impacts to aesthetics from the proposal in this section (see Exhibits 4-C2 to gain a sense of the discordant clutter of numerous poles and conductors at different sags). The removal of the Moscow substation, it should be pointed out, offers some improvement to aesthetics in the area, but the addition of the new line, conductors, structures, and clearing required, increases the scale and impact of the transmission corridor and its associated elements. In an open visible landscape the clutter of the poles all jumbled in the viewshed from the roads will be particularly disturbing and offend Stowe residents and visitors to the area. Indeed, in a 4-1-05 phone conversation with Stowe Planner, Tom Jackman, this area in particular was highlighted as one of great concern to the community. Thus, without sufficient and reasonable mitigation, and because it will offend or shock the citizens of Stowe if built, the potential exists here for an undue, adverse impact on aesthetics.

### **Mitigation Recommendations**

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

- 1) Employment of the single pole configuration options as proposed in George Smith's Testimony for DPS to limit height and visibility of the

line and its structures as it crosses Moscow Road and proceeds to mile 8.2 beyond River Road;

2) Roadside and street tree plantings widely spaced along Moscow Road and Route 100 to buffer views of the corridor; and,

3) A detailed planting plan for extensive floodplain plantings as recommended in an email from Tom Jackman, Planning Director for Stowe, 4-1-05, and attached screening plan, and buffer plantings along River Road and to “plug” the corridor as it ascends the hill above River Road. The floodplain plantings should follow the river course and help address streambank restoration efforts as well.

### **Mile 8.2 to Mile 9.4 From River Road to the Upgrade Terminus at the proposed Stowe Substation**

This section begins as the line moves up beyond River Road and the Little River Drainage on its way to the termination of the project at the proposed Stowe substation. Most of the route in this area is located away from residences and is less visible than the previous sections until mile 9.15, where it emerges from a wooded corridor and travels through open land and near residences located on or along Cady Hill Road. Construction of the line as proposed in this area will be adverse and risks becoming unduly adverse without appropriate and reasonable mitigation measures. The new lines and the heights of the poles as tall as 65 to 79 feet will shock the average person due to the substantial change in size and scale from what is there presently. This stretch is slated for both a 115kV line and two co-located 34.5kV lines.

### **Mitigation Recommendations**

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

1) Employment of the lowest height pole configuration options, for each line to limit visibility of the line and its structures as it crosses the open and settled areas in the vicinity of Cady Hill Road, and to reduce clearing widths; and,

2) Detailed plans for existing vegetation and what will be retained, as well as proposed new plantings to buffer and screen the line and poles in the open area; and,

3) Details of mitigation plantings at the residences themselves.

### Mile 9.4 The Proposed Stowe Substation

At mile 9.4 the proposed new Stowe Substation will be located in a residential area near the Stowe Lower Village Historic District, and within view of that district. It is proposed for construction next to the existing Wilkins Sub, an 80' x 120' footprint. The proposed new substation, at 190' by 230' will have a one-acre footprint in addition to the present substation. The height of the proposed 6 terminating structures will include A-frames, which will reach 60 feet with the proposed 10 foot lightning mast for the single 115kV structure and 40 feet with the proposed five (5) 34.5kV structures. Three (3) 50 foot lightning masts are also proposed along with a 15 foot high 24' by 26' control building.

While there is a small existing substation on the site today, the existing vegetation and scale are appropriate to the site topography and screening vegetation. Limited views from Cady Hill Road and surrounding residences are and will be possible with the new substation constructed.

Based on Exhibit Boyle-Portz-4B2, and photograph 4-A23 from Boyle-Portz-3, as well as site visits to the area, these structures will be visible from the Lower Village Historic District. This is a scenic and historic area that will be adversely impacted by the new substation, which will be a minimum of 75 feet above the village and over 100 feet above the Little River. The Lower Village is some 1000 feet distant and thus is proximate enough to experience an adverse impact from this proposal, which is not consistent with its surroundings. It is hard to argue, as Mr. Boyle does, that any substation is consistent with its surroundings if those surroundings are either rural residential or village land uses. While substations are necessary infrastructure, that does not translate into a consistent land use - so a distinction must be made between consistent land uses and a single infrastructure element of this sort. That is why siting and screening are critical to de-emphasize or hide such land uses, and thus it is incorrect to imply such land uses are compatible or harmonious with these types of surroundings.

The one light on the photocell will not pose a problem due to the distance of abutting neighbors in the immediate vicinity, and with proposed new screening and planting. The perimeter lights, as VELCO has stated in testimony, will be used only for emergency purposes.

The noise generated by this facility will have a minimum impact on the Village area, but there are several residences a few hundred feet from the proposed new sub and a total of 12 existing surrounding homes, as well as 15 proposed new homes that will be receptors of the noise increase.

The existing residences will experience an increase in noise of up to 35 to 39dBA, which, although below World Health Organization standards as cited in VELCO Exhibit KHK-3, will still potentially result in an adverse impact. See George Smith's Testimony for further discussion of this issue.

The conclusion from this analysis is that the proposal will result in an adverse impact. The current mitigation plans are not sufficient to fully reduce the visual and aesthetic impacts of this proposed substation. The existing and proposed planting (particularly if beefed up) will provide some noise attenuation, along with berming, but it needs to be more extensive and more carefully designed to not call attention to the facility, rather to fit it in within natural and extant landscape and topographic patterns. VELCO has failed to take all reasonable steps to mitigate this component of the LCP and therefore an undue adverse impact could result.

### Mitigation Recommendations

To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard:

- 1) Redesign and expansion of the berming and planting to reflect natural patterns and extension of existing topography;
- 2) Additional native plantings with a range and diversity of native species to create a natural vegetative pattern on 3 sides of the project area (north, south, and east); and,
- 3) A reliable existing vegetation map needs to be prepared and all existing vegetation outside of the expansion footprint delineated and where important or part of a screening plan, protected.

Additionally, and as an effective alternative mitigation measure that will aid in screening and buffering, the proposed new footprint should be separated from the Wilkins sub and shifted slightly to the south to allow the existing row of deciduous vegetation just south of the Wilkins sub to be retained.

*Please refer to the "Plant Materials Guide" and "Guidelines for Aesthetic Mitigation" on pages 141 through 150 in LandWorks' report, "Aesthetic Assessment and Recommendations for the Proposed VELCO Northwest Reliability Project Transmission Line and Substation Upgrades," already on file with the Public Service Board as part of Docket #6860. Applicable guidelines include G1 through G8, and G10 through G13. For a recommended comprehensive approach to mitigation see, in thi docket Exhibit DPS-DR-3, "Multi-*

## Mitigation Recommendations for Areas of Highest Aesthetic Sensitivity

### Lamoille County Project 115kV Line and Substation Upgrades

DPS-DR-1

*Step Planning and Design Process/Methodology for Addressing Mitigation of Transmission Lines and Corridors.” See Exhibit DPS-DR-2 in this docket for proposed pole sizes and scale for the structures being used in the LCP 115kV upgrade.*



# Middlesex to Stowe Transmission Line Upgrade

## Overview of Individual Sections of the Route

DPS-DR-1

Section 1: Mile 0.0 to Mile 1.2  
Proposed Duxbury Switching Station to Blush Hill Road Crossing  
in Waterbury

Section 2: Mile 1.3 to Mile 3.1  
Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

Section 3: Mile 3.2 to Mile 4.5  
Second Blush Hill Rd. Crossing to Southern End of Gregg Hill Rd.

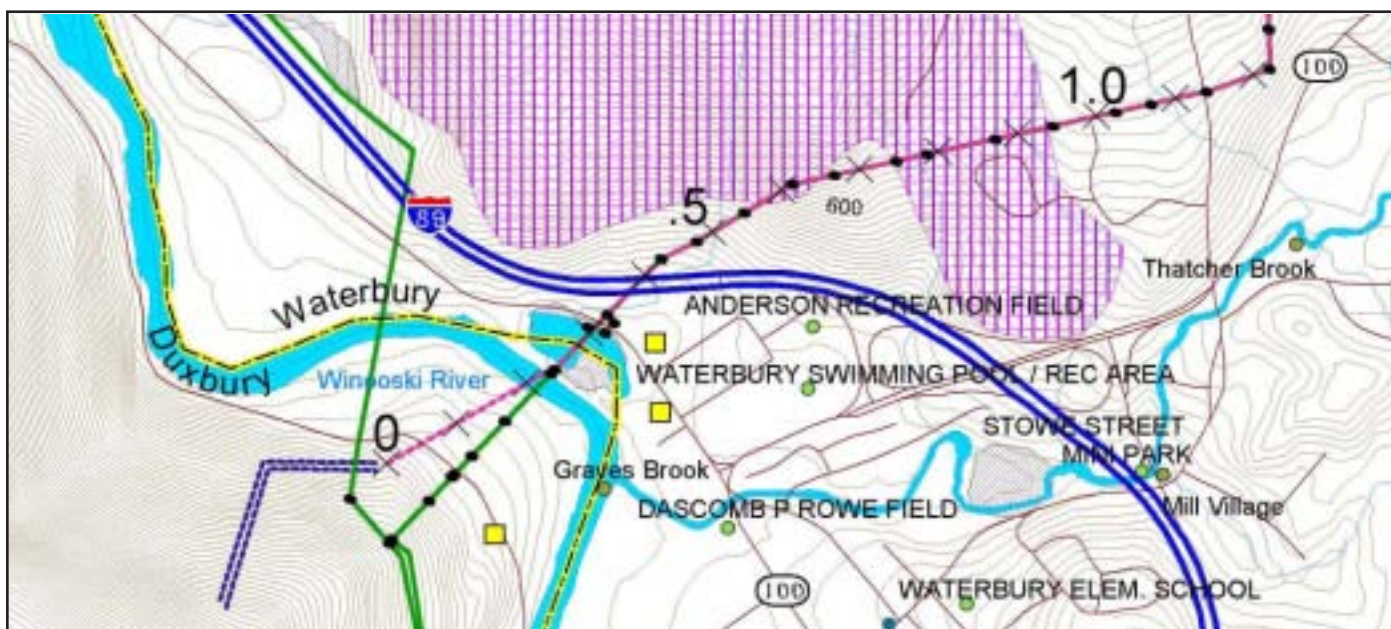
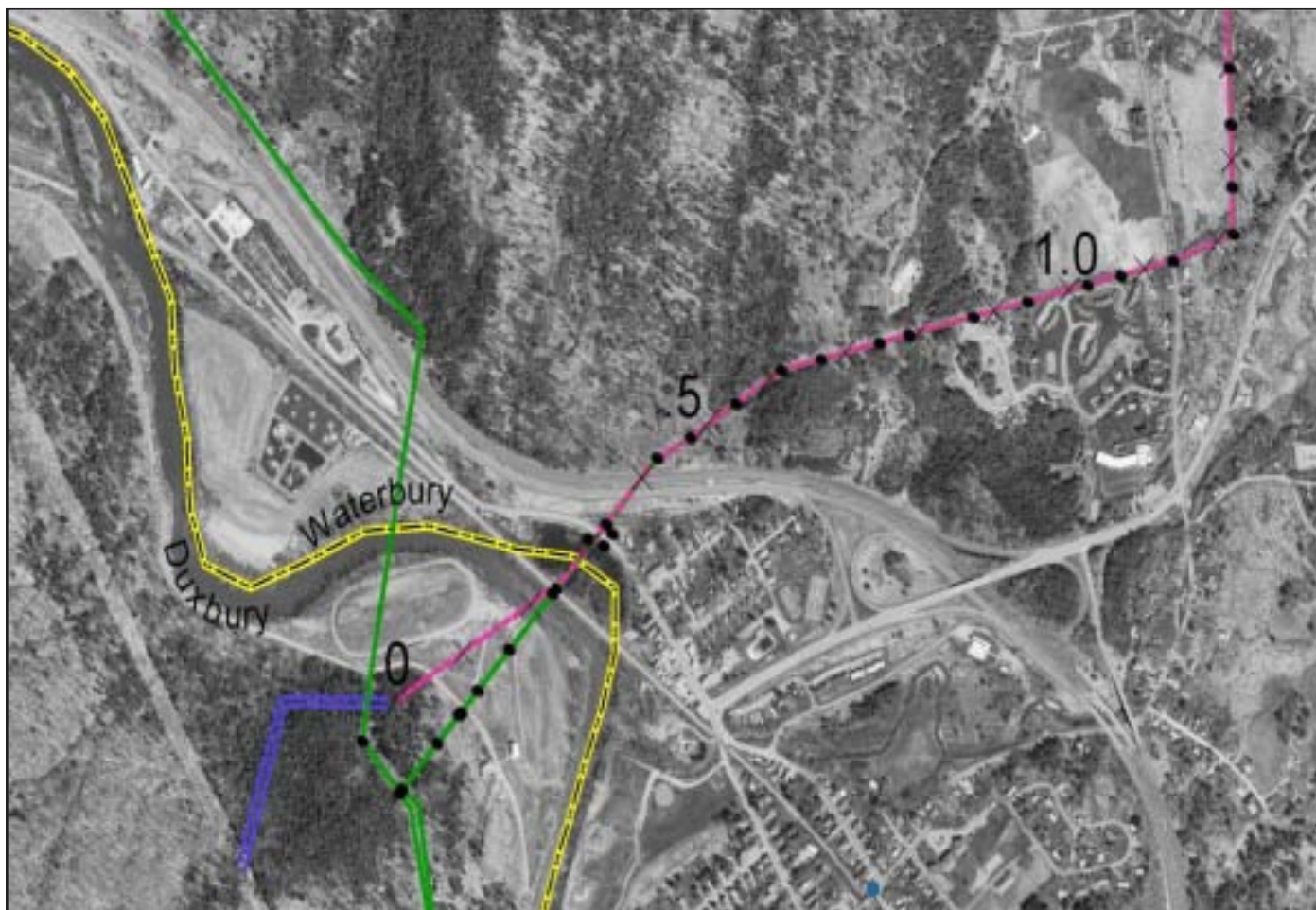
Section 4: Mile 4.7 to Mile 6.8  
Along Gregg Hill Rd. to Stowe Town Line

Section 5: Mile 6.9 to Mile 8.2  
Stowe Town Line to Moscow Substation

Section 6: Mile 8.3 to Mile 9.4  
Moscow Substation to Stowe Substation



The Legend at left is for the proposed route maps with existing conditions.



Numbers on Map represent Mile Markers on the proposed line upgrade; Shaded overlays represent Conserved Public and Private Lands, Deer Wintering Habitat, Historic Districts, Sites or Buildings, and Wetlands; Proposed line shown in pink.

GIS Data from VCGI and VELCO. Data is only as accurate as the original source. LandWorks does not guarantee accuracy of this data.

## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Near  
Mile 0.0**

View of the existing 34.5 kV line crossing River Rd. north-east of the historic Atherton-Harvey Farm in Duxbury. Prominent views of the Bolton Range northwest of the farm.



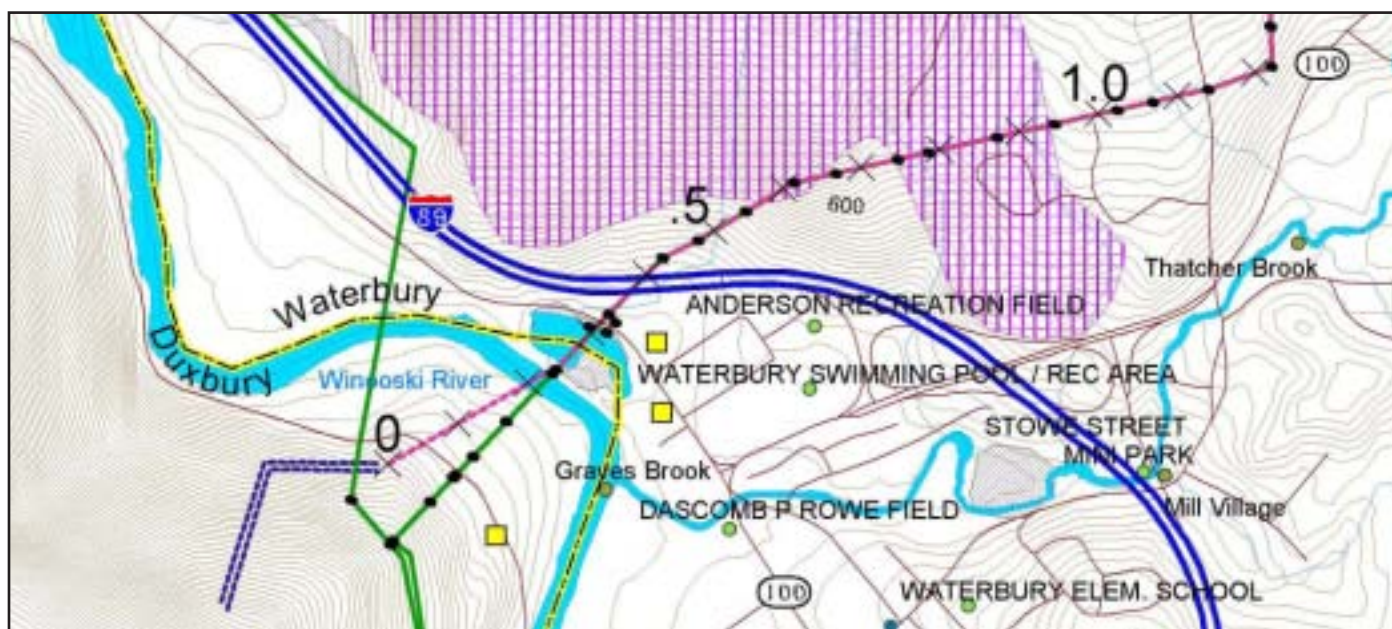
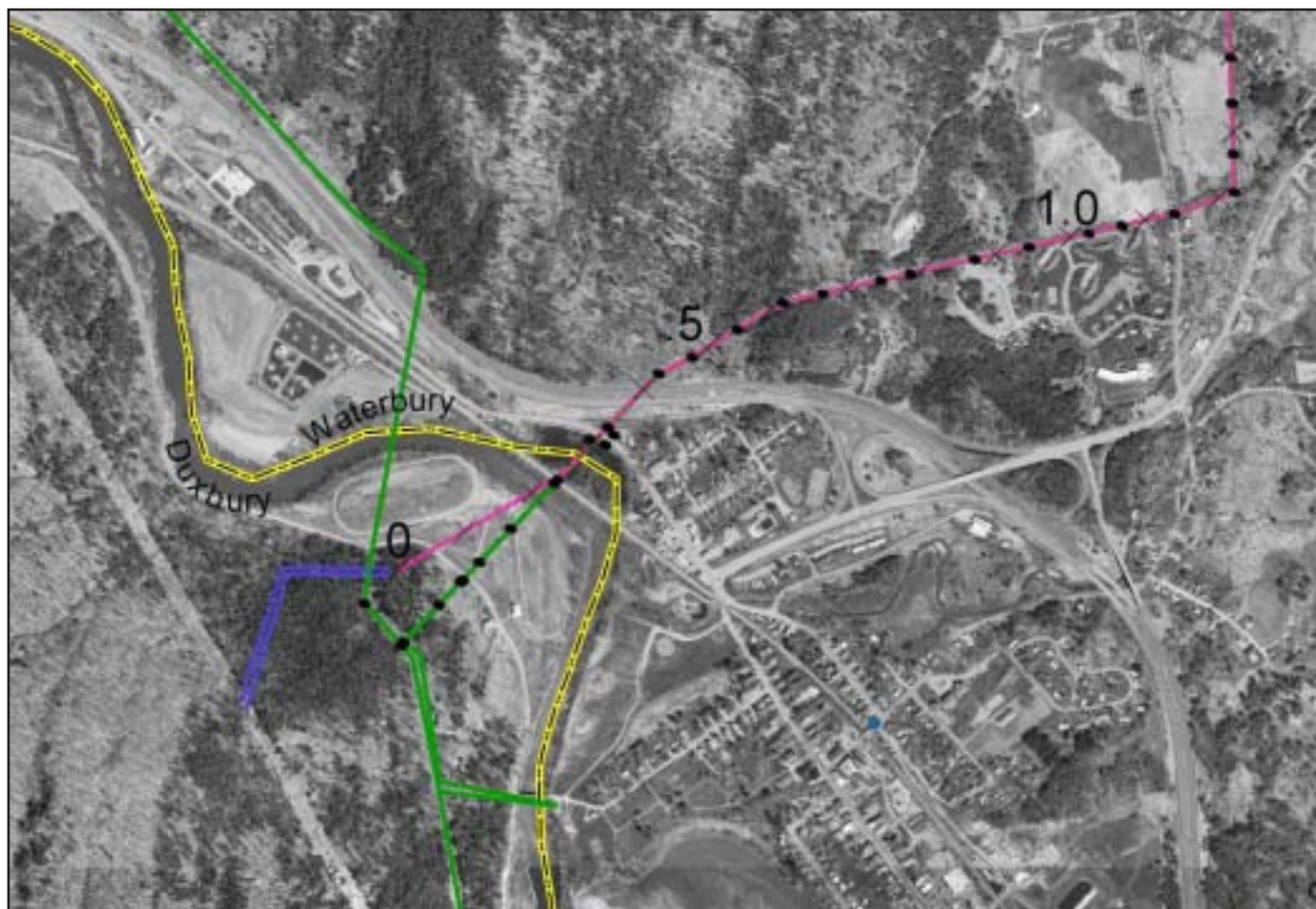
**Near  
Mile 0.0**

View of Atherton-Harvey Farm with poles located in the farm's open field / pasture. Distribution line along River Rd. These poles will be removed.



**Near  
Mile 0.0**

View of the historic barn and existing line and structures located in the open field / pasture.



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GIS Data from VCGI and VELCO. Data is only as accurate as the original source. LandWorks does not guarantee accuracy of this data.

## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Near  
Mile 0.0**

View of historic barn with existing tree-cut visible. The increased corridor width may affect the visibility of the line ascending the southern slope of Blush Hill.



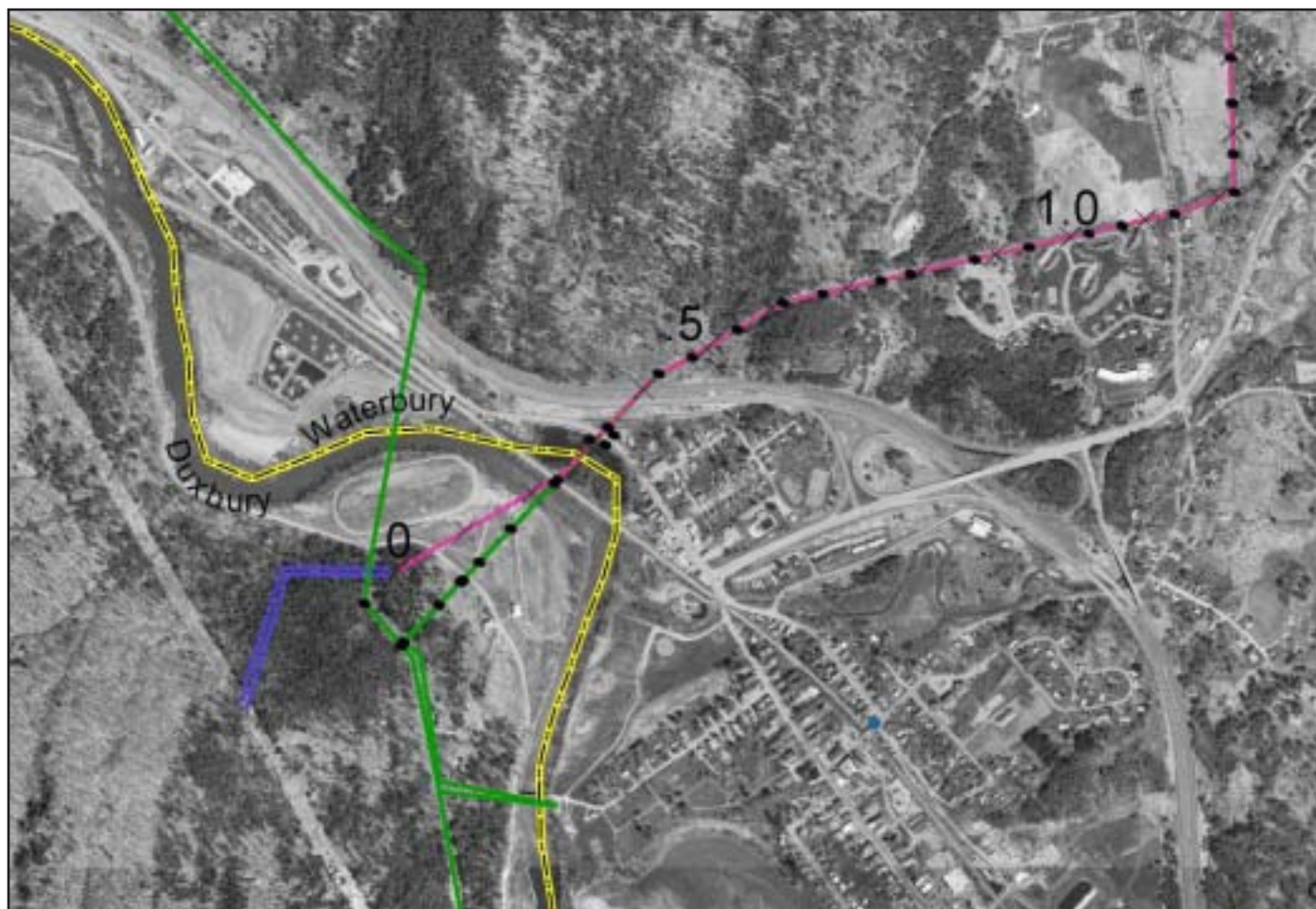
**Near  
Mile 0.0**

View north at existing crossing on River Rd.



**Near  
Mile 0.0**

View south at existing crossing on River Rd. An aesthetic improvement will be gained with the removal of the existing GMP line, but the new cut and proposed H-frames will add a significant new impact here.



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## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Near  
Mile 0.0**

Vicinity of new corridor. "Cut" and structures will be visible.



**Approx.  
Mile 0.0  
- 0.1**

View of proposed 115 kV crossing on River Rd. 115 kV will descend down the north-eastern slope of Crosset Hill in Duxbury. Note that River Road is a well used recreational walking/jogging/biking route.

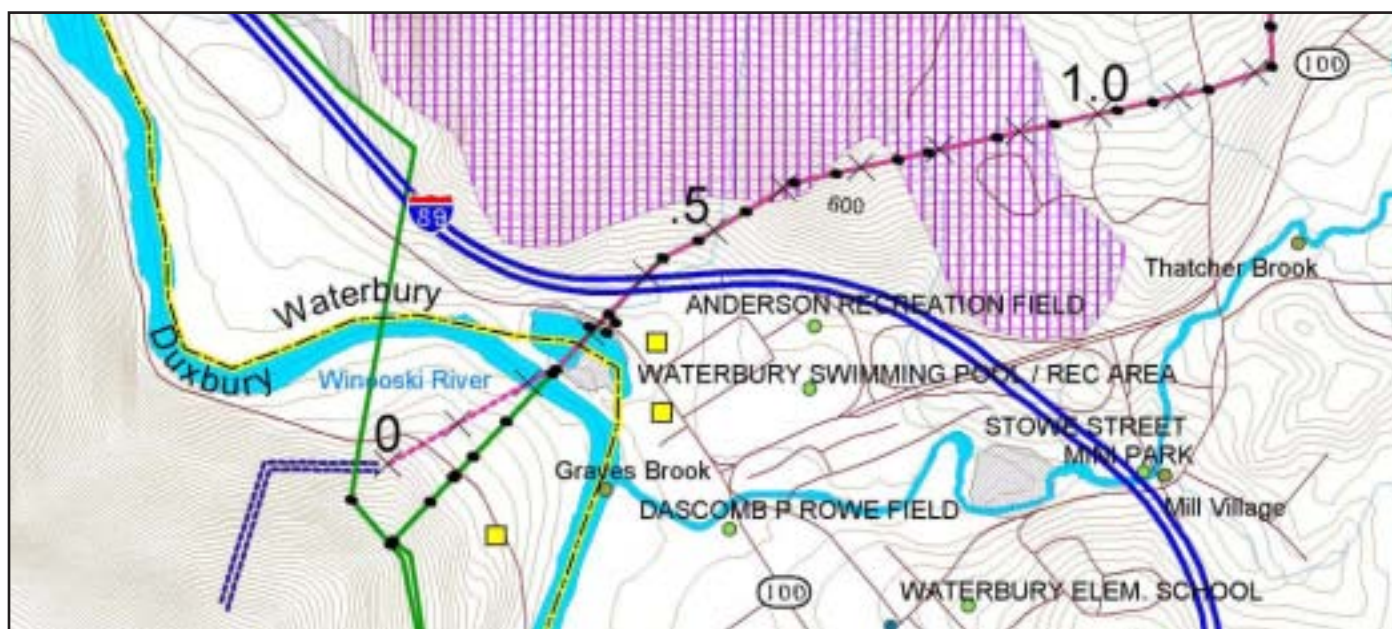
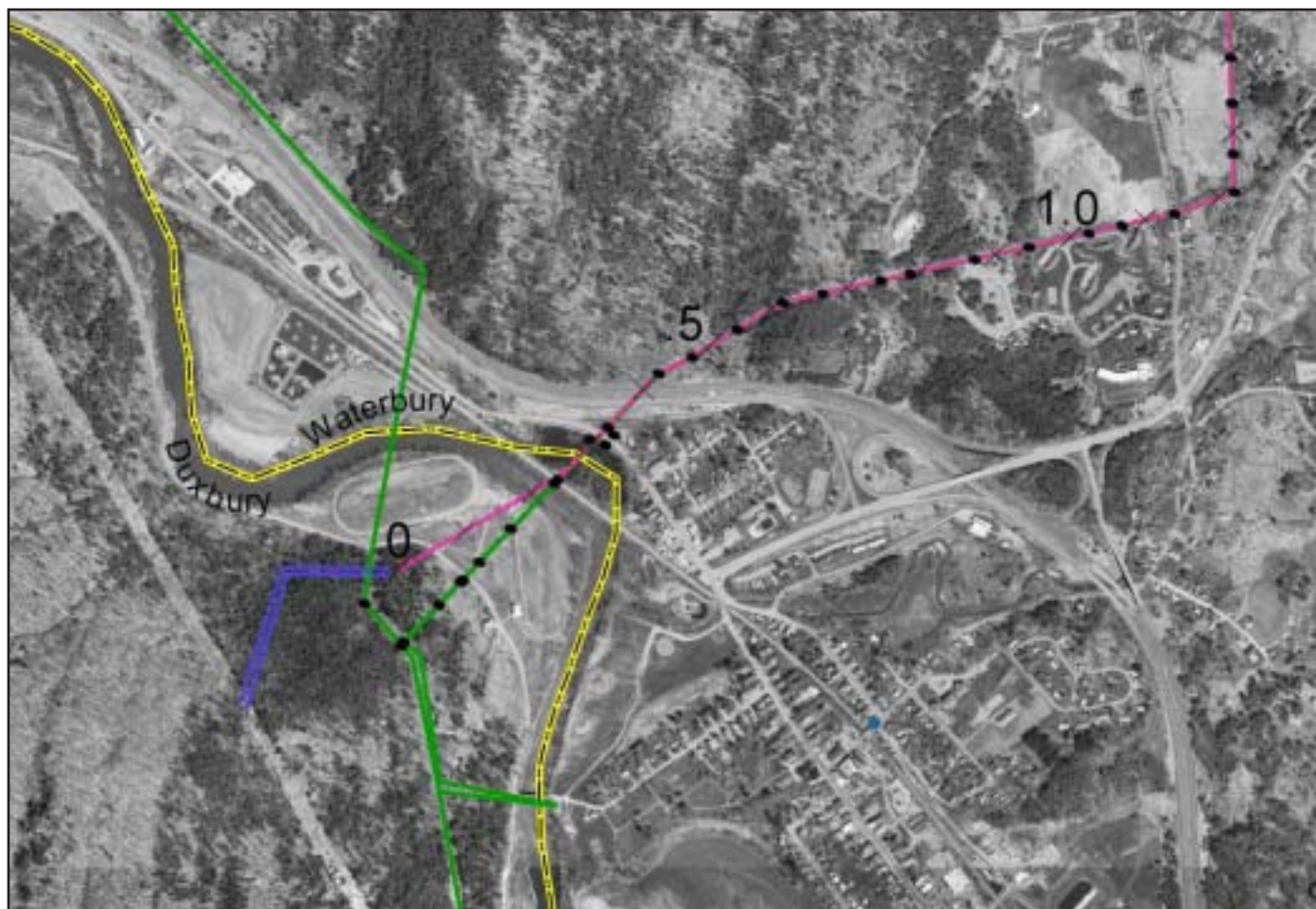


**Approx.  
Mile 0.0  
- 0.1**

Wooded slope of Crosset Hill where existing vegetation will be cleared for new corridor. The potential exists for the removals to result in extensive new openings with loss of trees beyond R.O.W.

# Aerial Photograph Map and Location Map

DPS-DR-1



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## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Approx.  
Mile 0.1  
- 0.2**

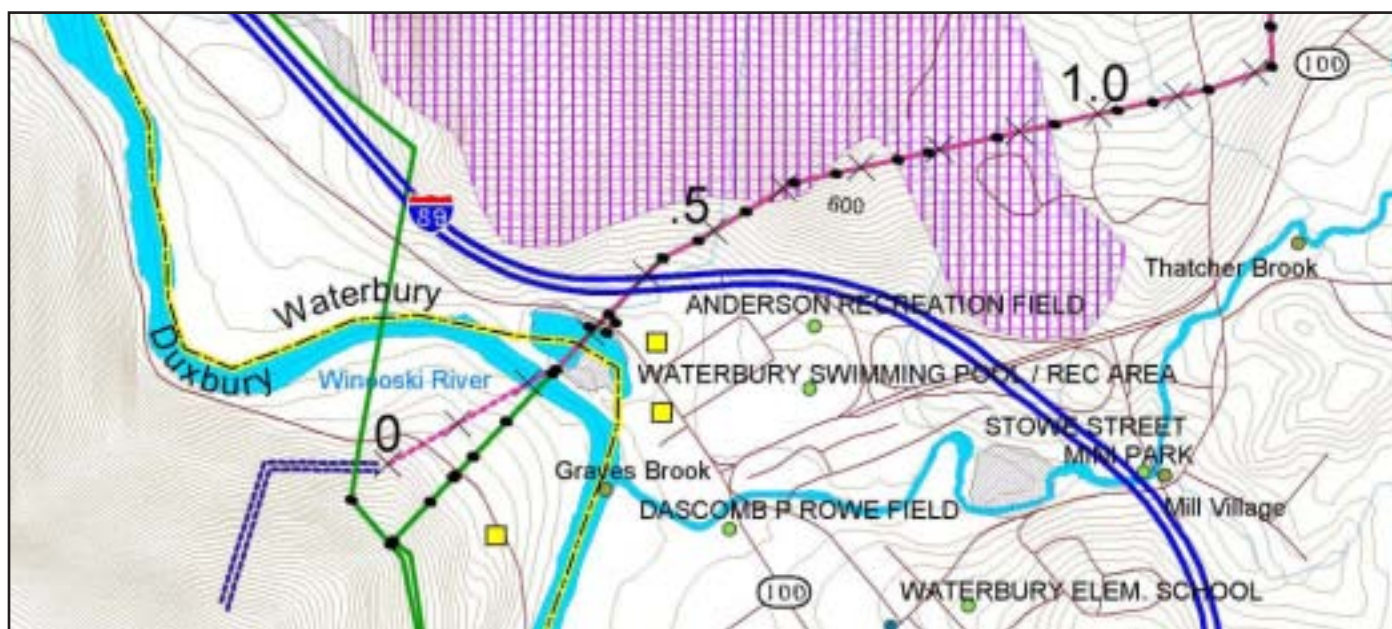
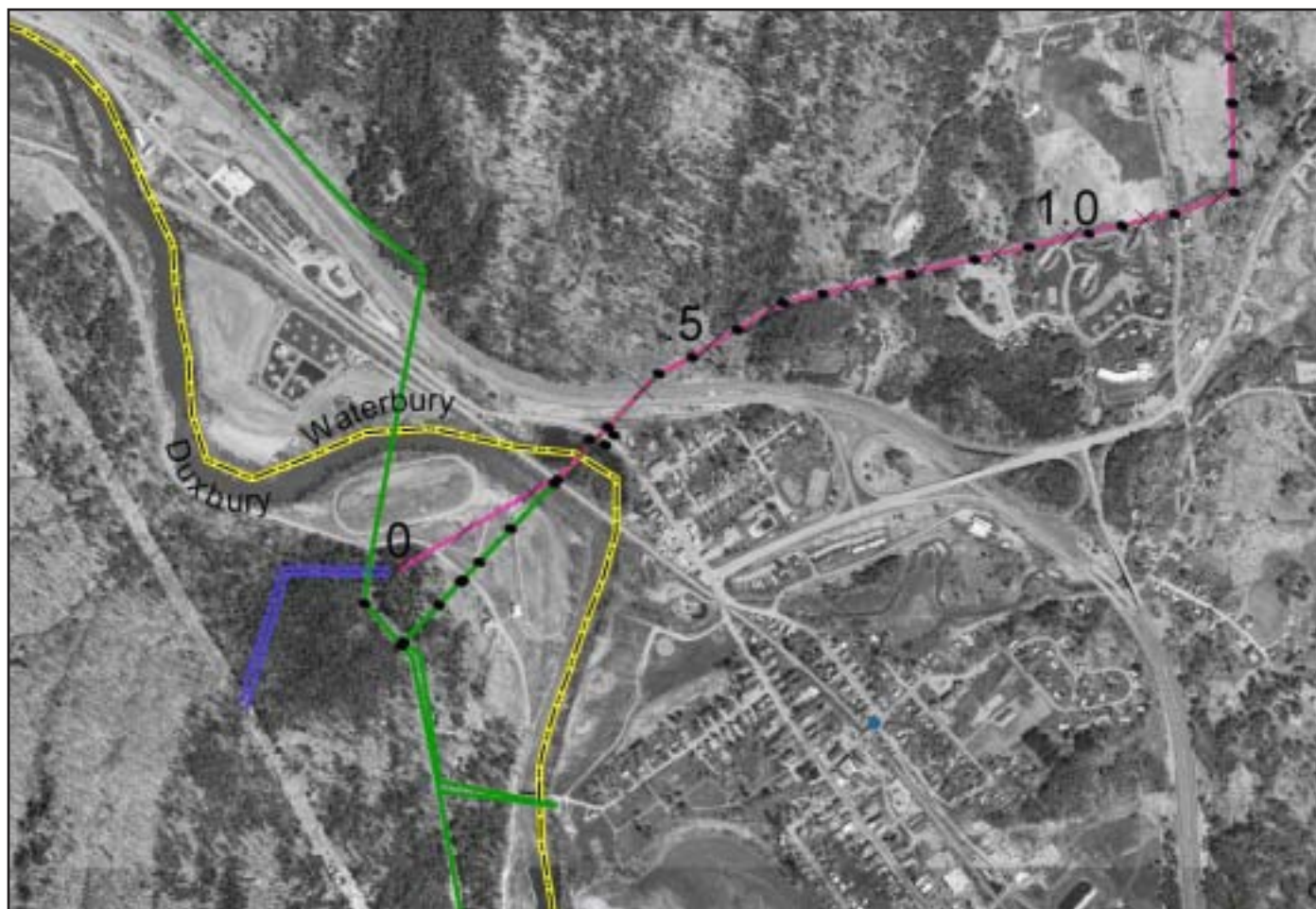
View north across Atherton-Harvey Farm toward existing 34.5 kV corridor. The new line will add large scale structures to the middle of an open space - significantly undermining that open space.



View from river Rd. of existing Green Mountain Power Line (#3312). Proposed 115kV corridor will cross the existing corridor.



Looking at hillside where new cut is proposed. Vegetation may or may not hide new corridor. This poses a definite concern for potential visual impact. Distribution line in foreground.



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## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



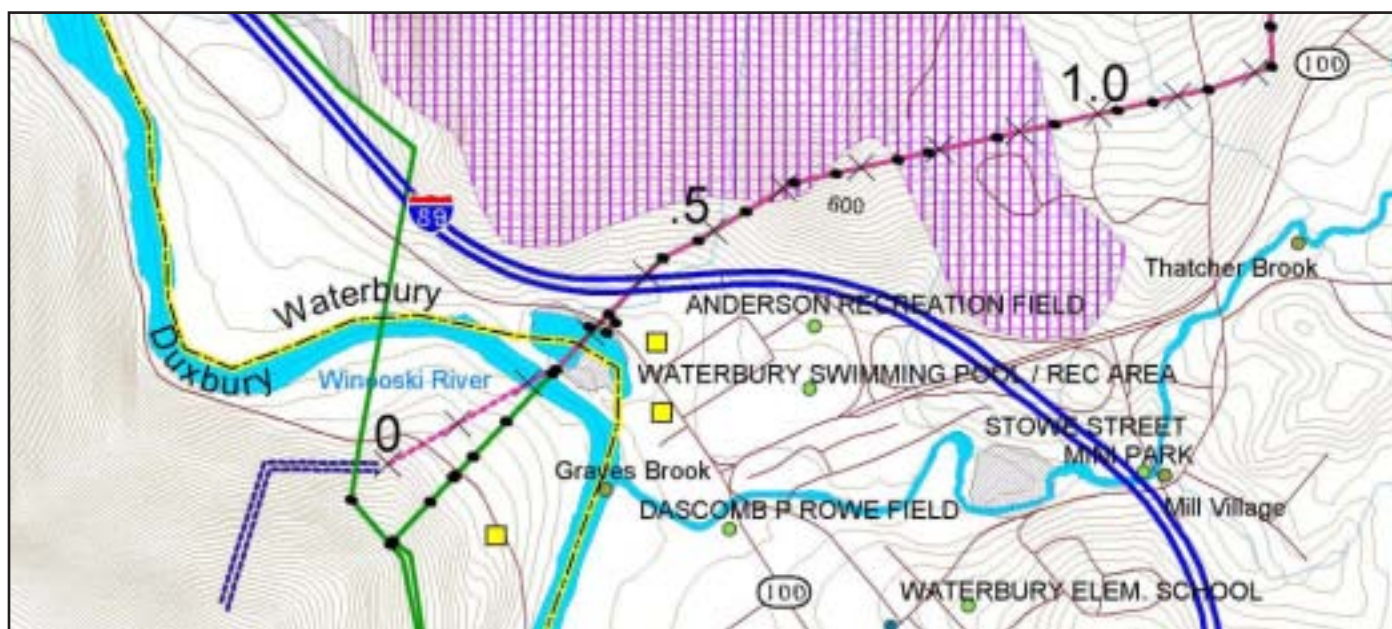
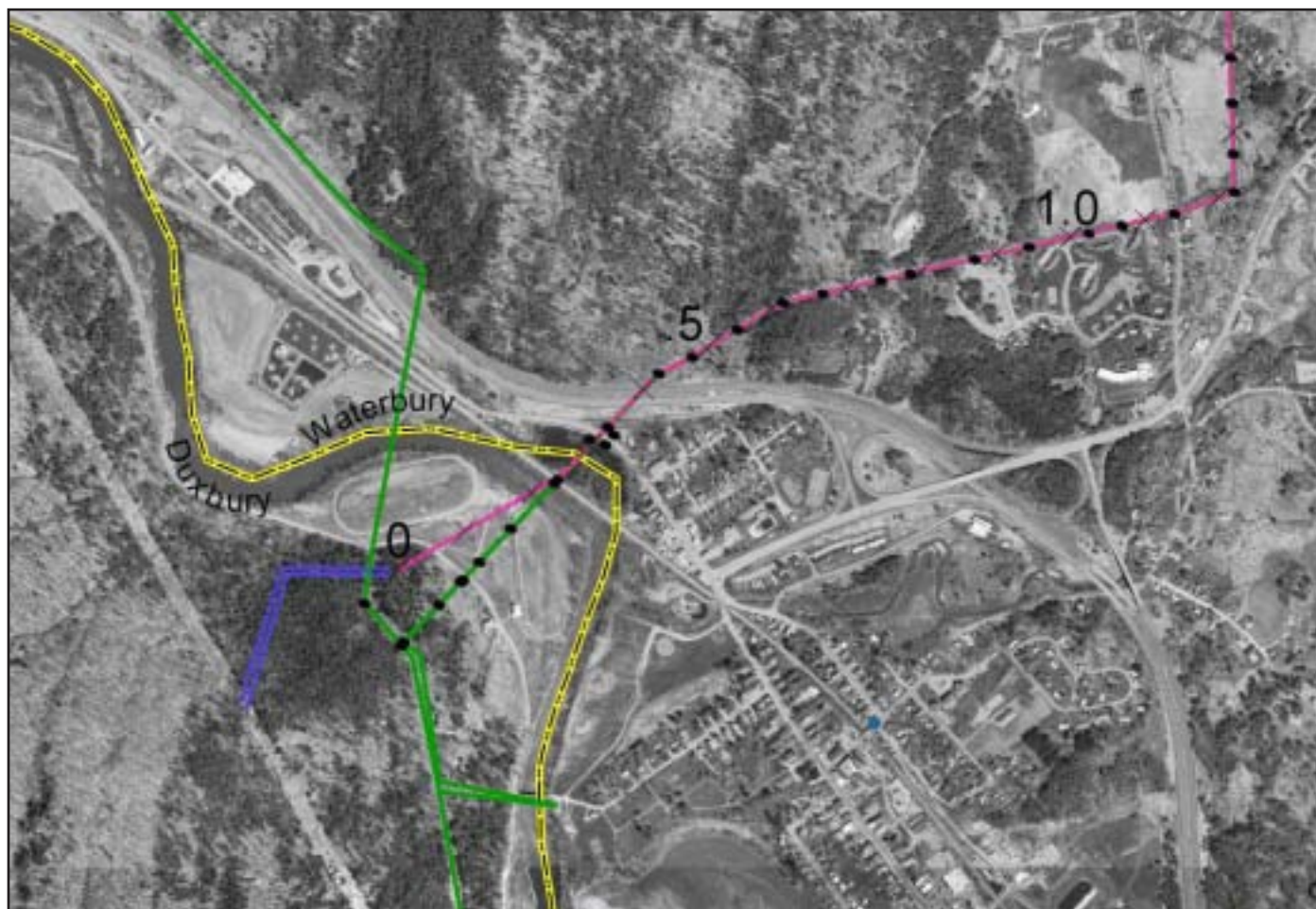
View from River Rd. looking up Crosset Hill parallel to new cut. With the loss of trees there is concern that the new corridor will be very visible. There is not substantial screening there today.



Parallel to new corridor. Replanting of evergreens (hemlocks) at corridor edge is critical, along with vegetative management and planting outside of the right of way will be necessary.



Heading east on River Rd. The cut on the south side of Blush Hill is highly visible, and will widen with the new construction. New street tree plantings here and on North Main Street may be desirable to de-emphasize views.



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## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Approx.  
Mile 0.3**

View north from Route 2 in Waterbury.

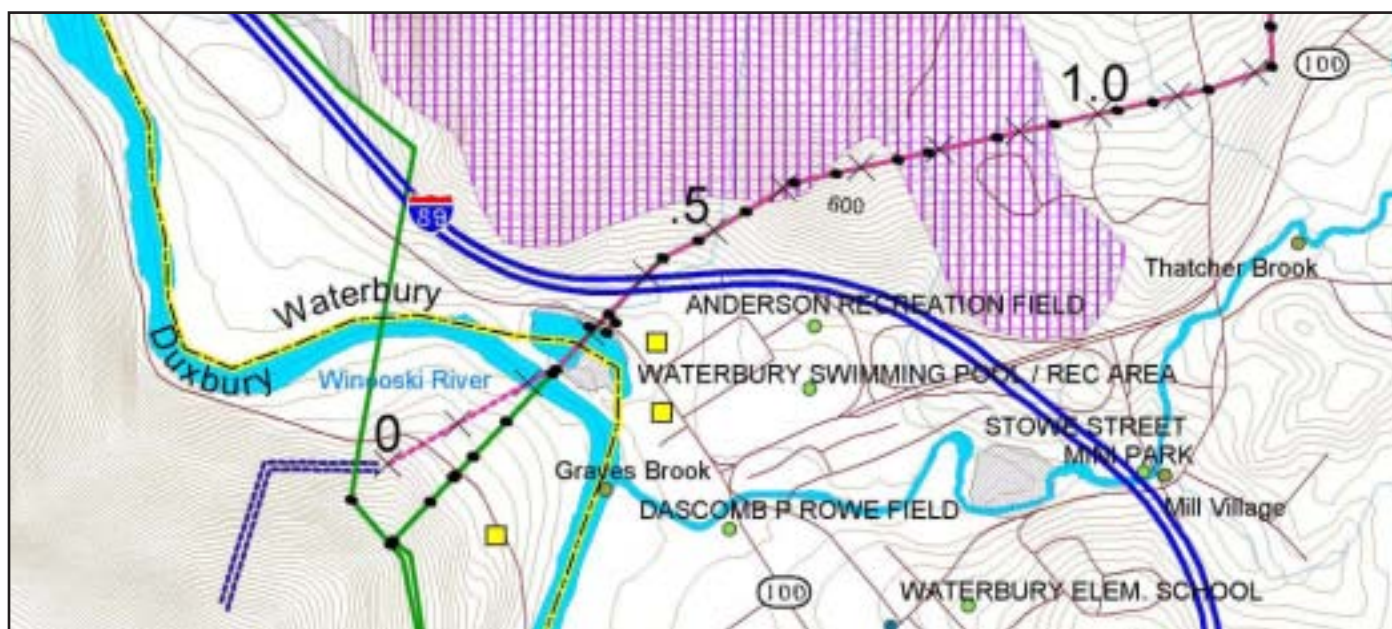
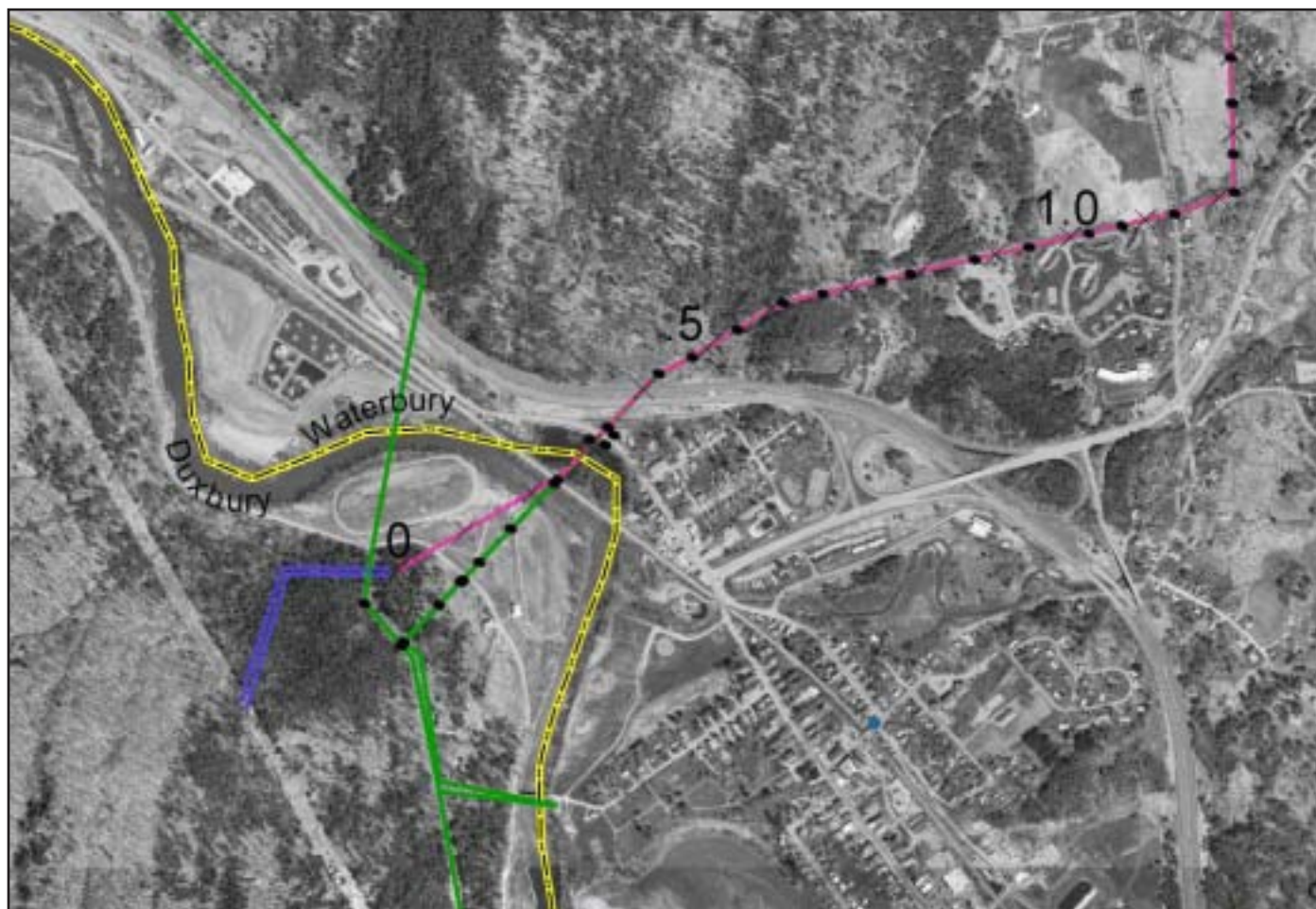


**Approx.  
Mile 0.3**

View south from Route 2 in Waterbury across the Winooski River.



View from sewage treatment plant south of Route 2 in Waterbury. Northeastern slope of Crosset Hill where new cut is proposed. Street tree planting along North Main Street will de-emphasize views in this direction.



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## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Approx.  
Mile 0.3**

View south to Crosset Hill from Interstate 89 (southbound). The existing corridor is highly visible, the new corridor will be visible as well and further impact those lower slopes of Crosset Hill and undermine visual quality in an area that the town of Duxbury.



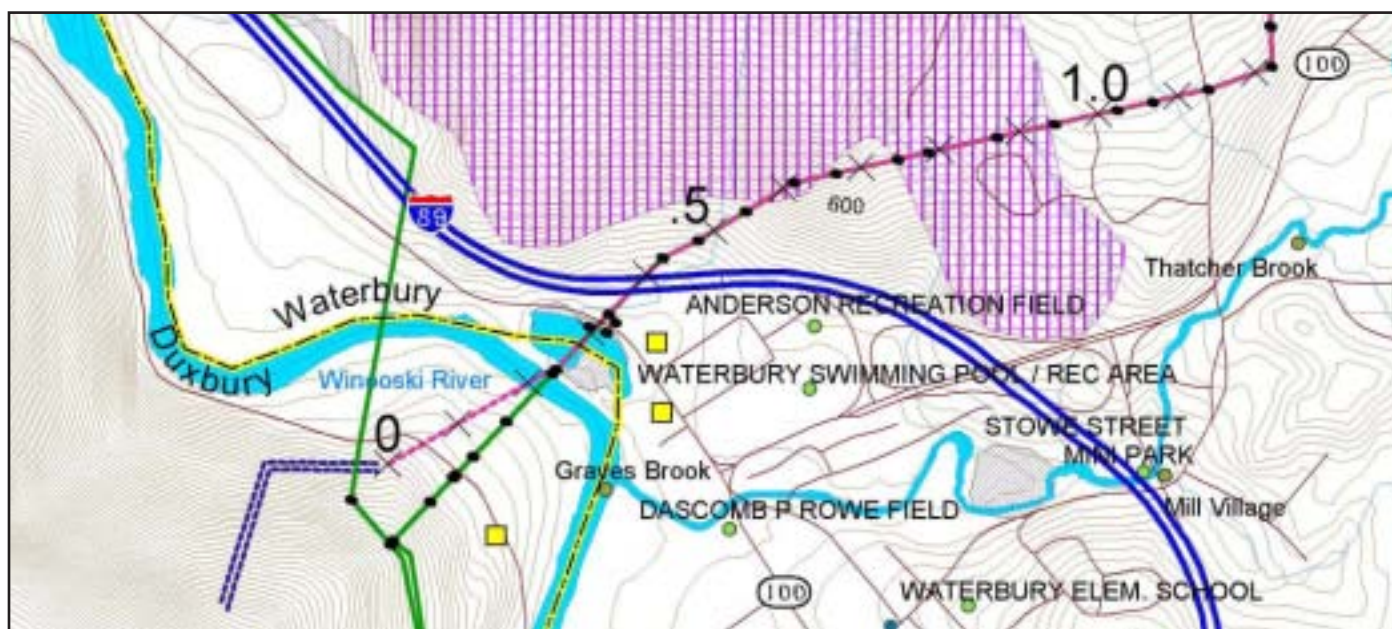
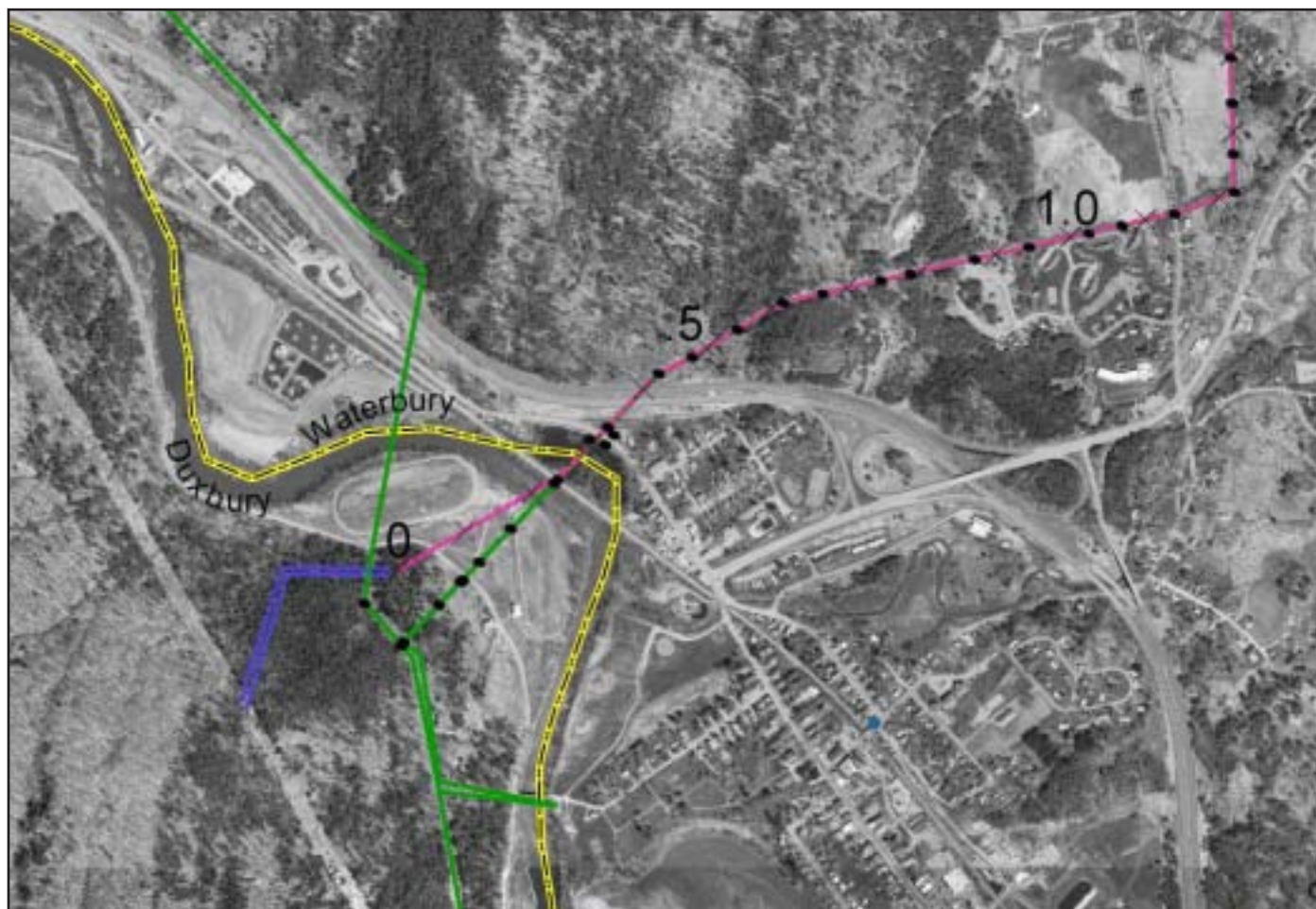
**Approx.  
Mile 0.3**

View south of existing 34.5kV line from Interstate 89 (southbound).



**Approx.  
Mile 0.3**

View south from Interstate 89 (southbound) as the existing 34.5 kV line crosses the interstate. Clearing/higher structures and proximity to the Interstate will undermine travelers views of the area.



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## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Approx.  
Mile 0.3**

View looking north from Interstate 89 (southbound). A wider cut may result in a box cut. New structures may reach above treeline.



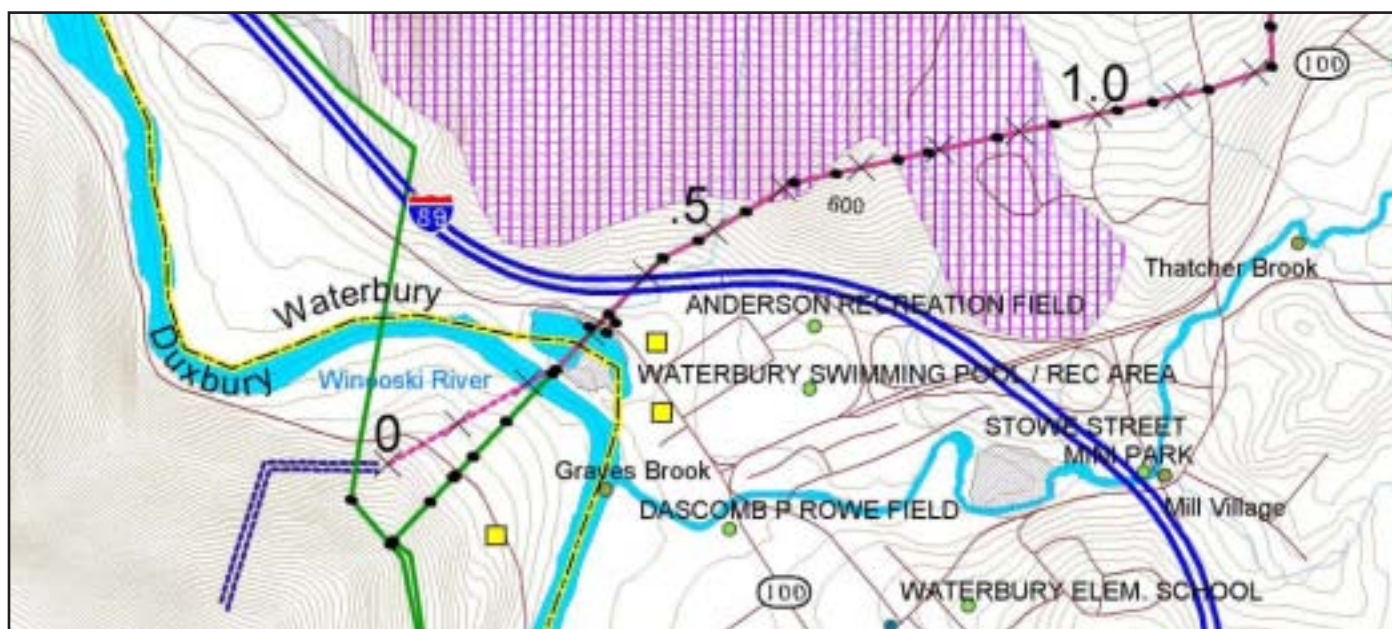
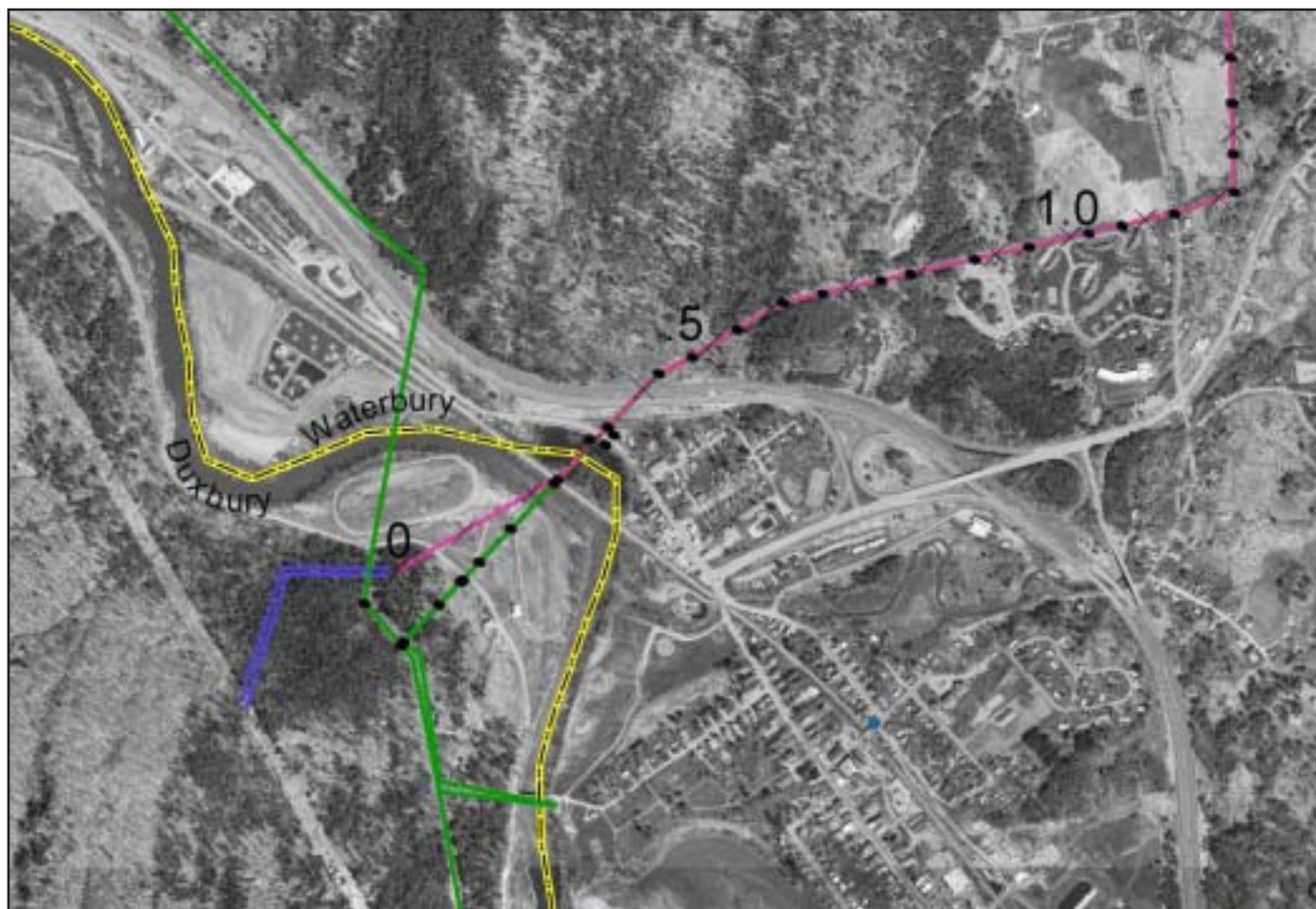
**Approx.  
Mile 0.8**

View toward line from Ashford Dr. in Waterbury. Mix of light woods and evergreens act as a buffer between the line and the homes adjacent to the line.



**Approx.  
Mile 0.9**

View of the line from Ashford Dr. Allow pines and birches along roadside to grow. Backdrop pines are critical, and extensive clearing along with new pole heights may create an undue, adverse impact in neighborhoods along the road.



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## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Mile 1.0**

View southwest from Acorn Dr. Trees help to background line behind homes.



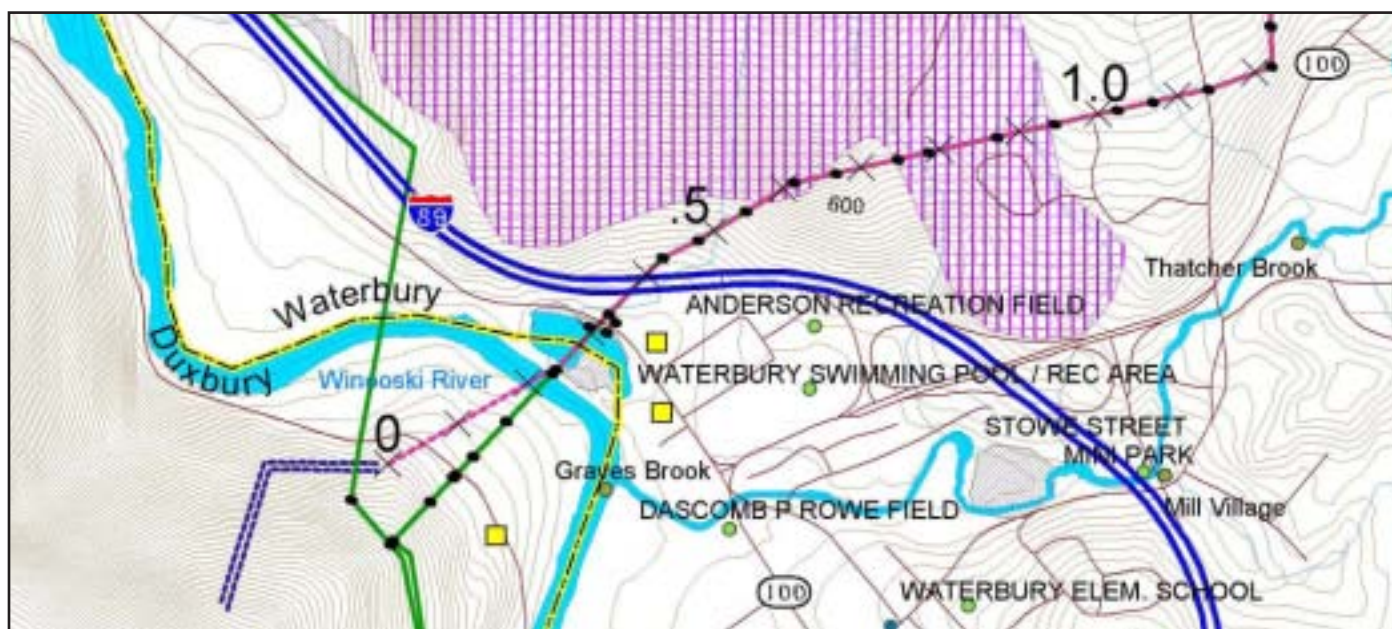
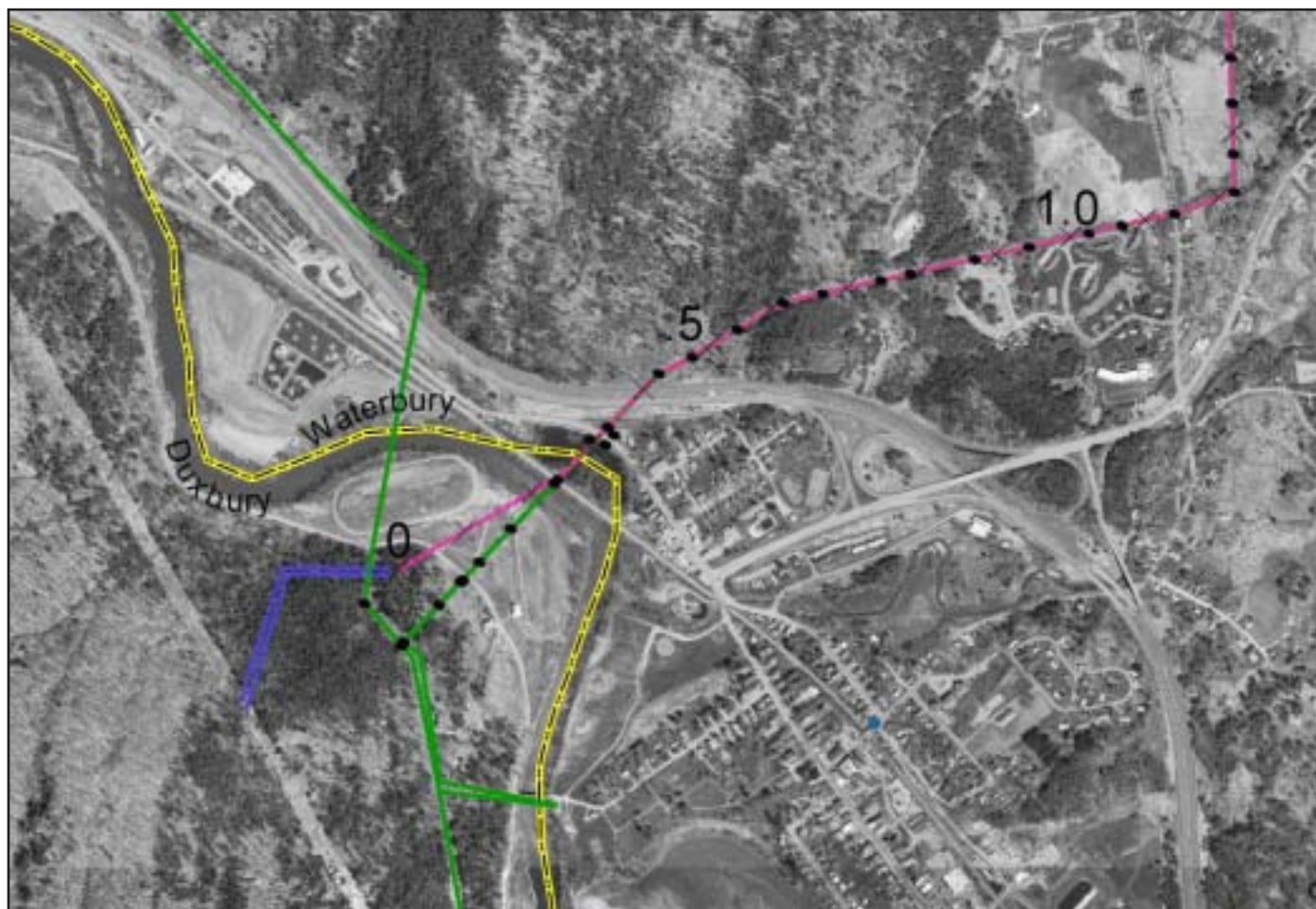
**Mile 1.0**

View of lines looking northeast on Acorn Dr. The addition of taller structures will have an adverse visual impact in this location.



**Approx. Mile 1.0**

View northeast from Acorn Dr. Short pines help block existing pole, and must be retained.



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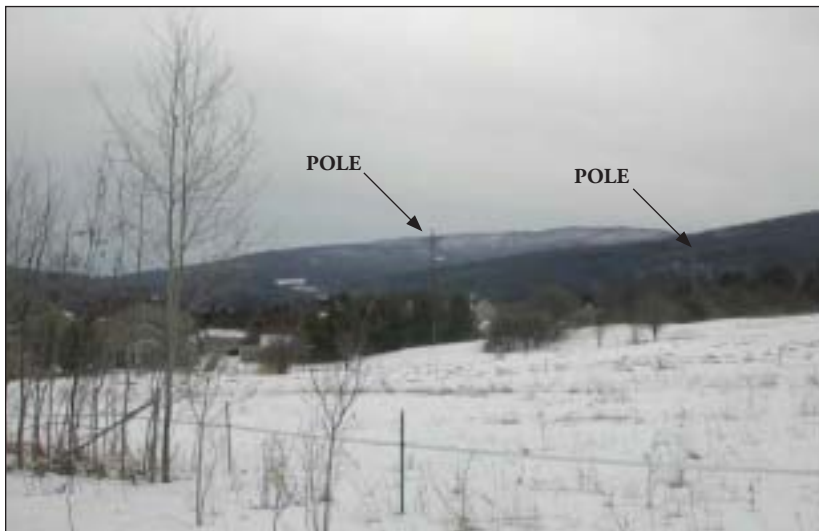
## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Approx.  
Mile 1.0  
- 1.1**

View from Acorn Dr. as line descends downhill.

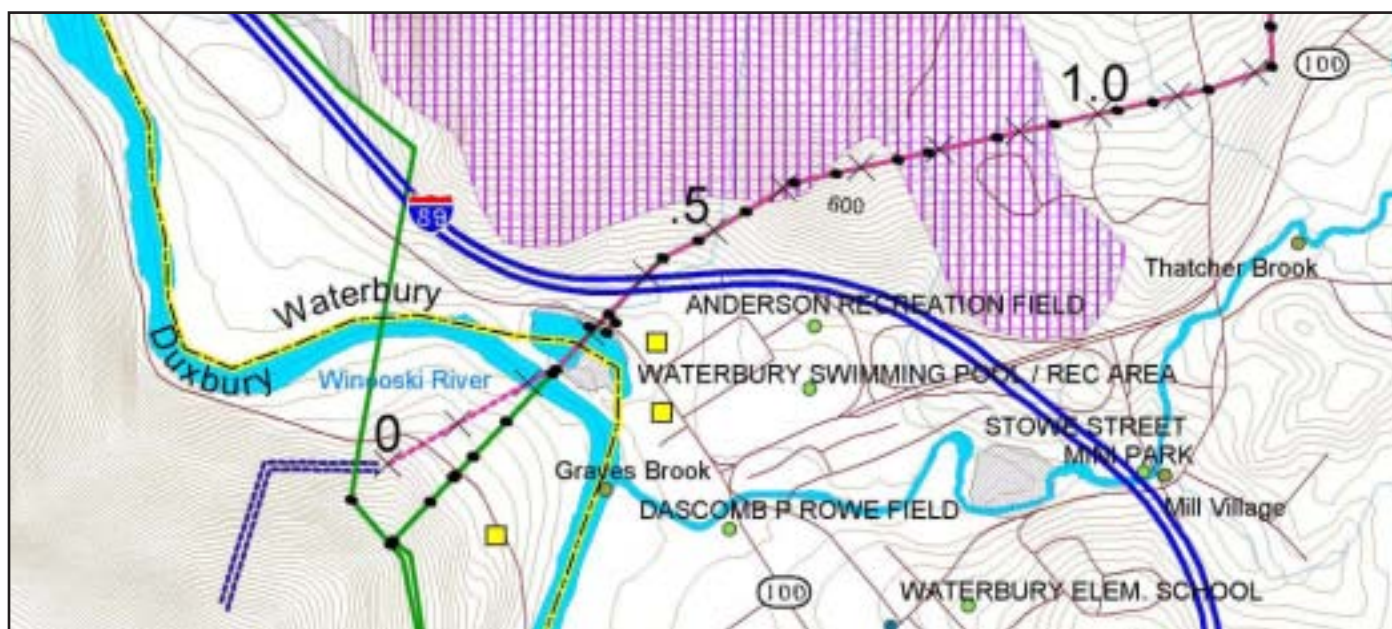
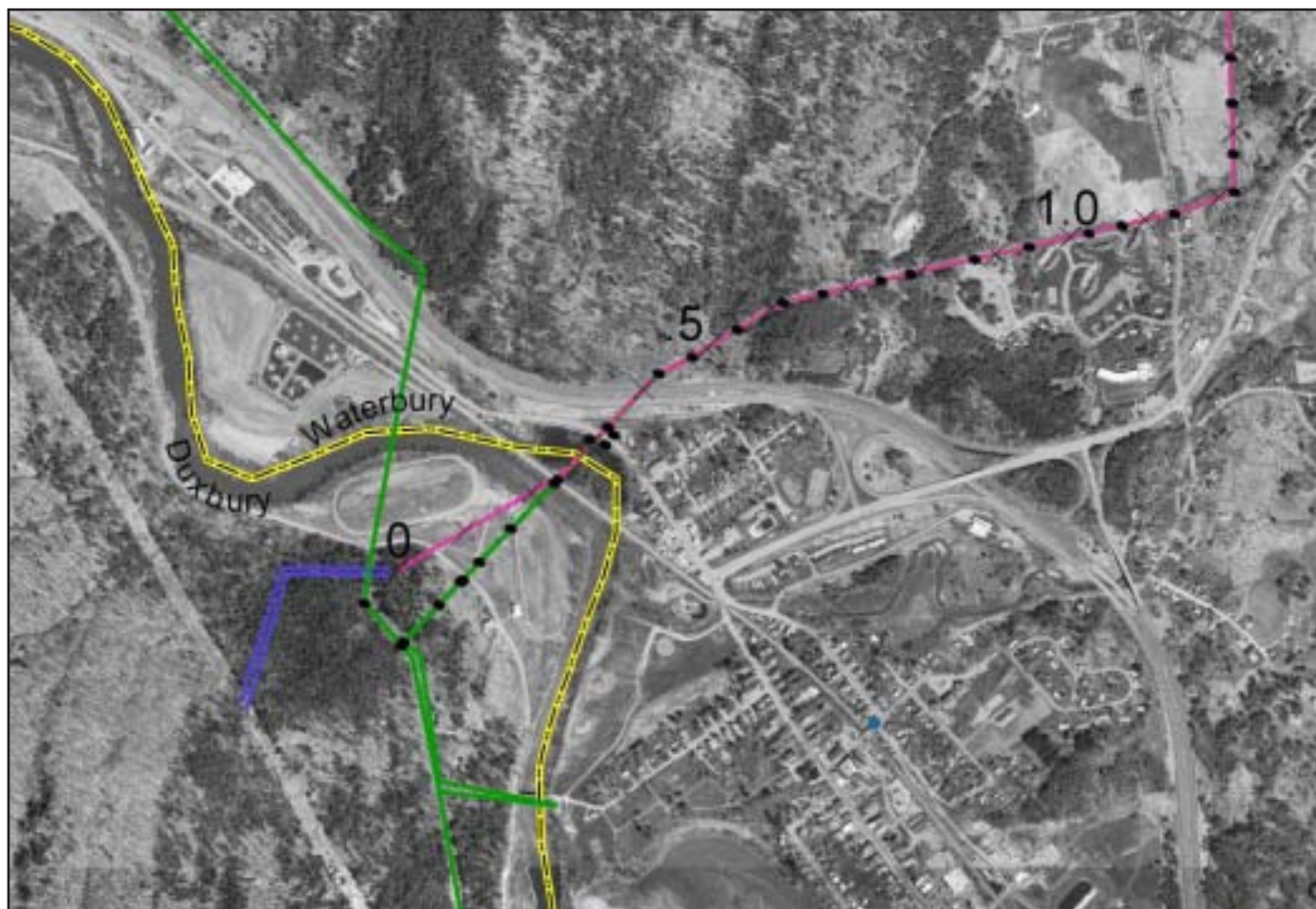


**Approx.  
Mile 1.0  
- 1.1**

View of corridor from Blush Hill Rd. (heading south).



View south towards existing transmission line as it approaches Blush Hill Rd. The line is currently below the backdrop. Elements in foreground help de-emphasize the line, and must be retained.



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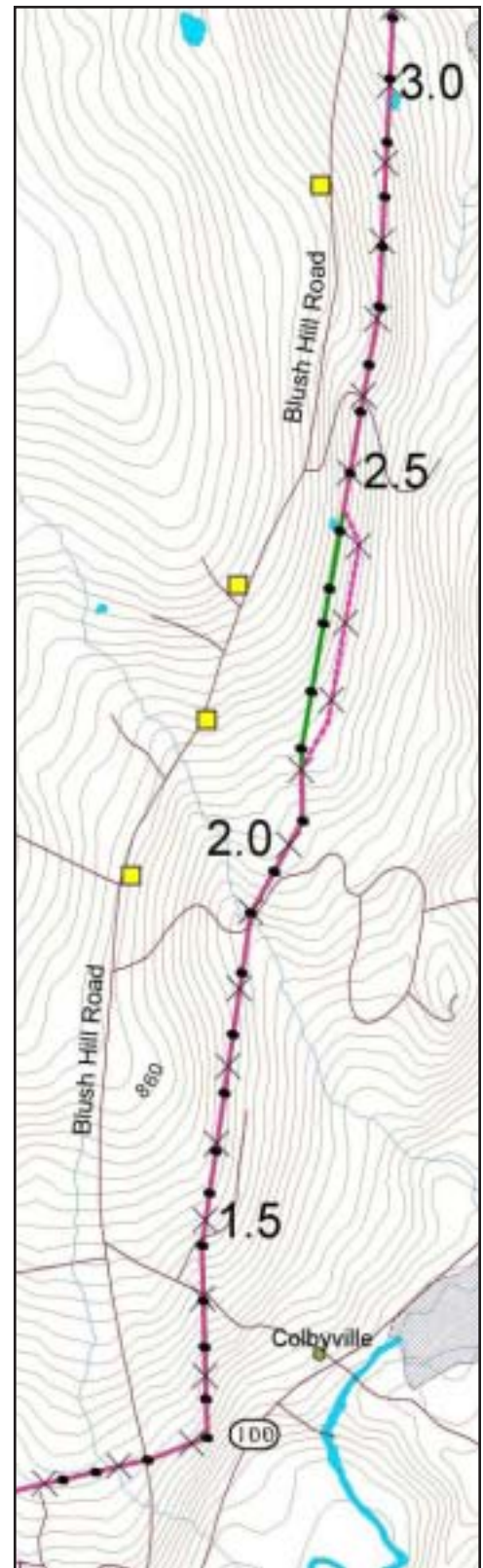
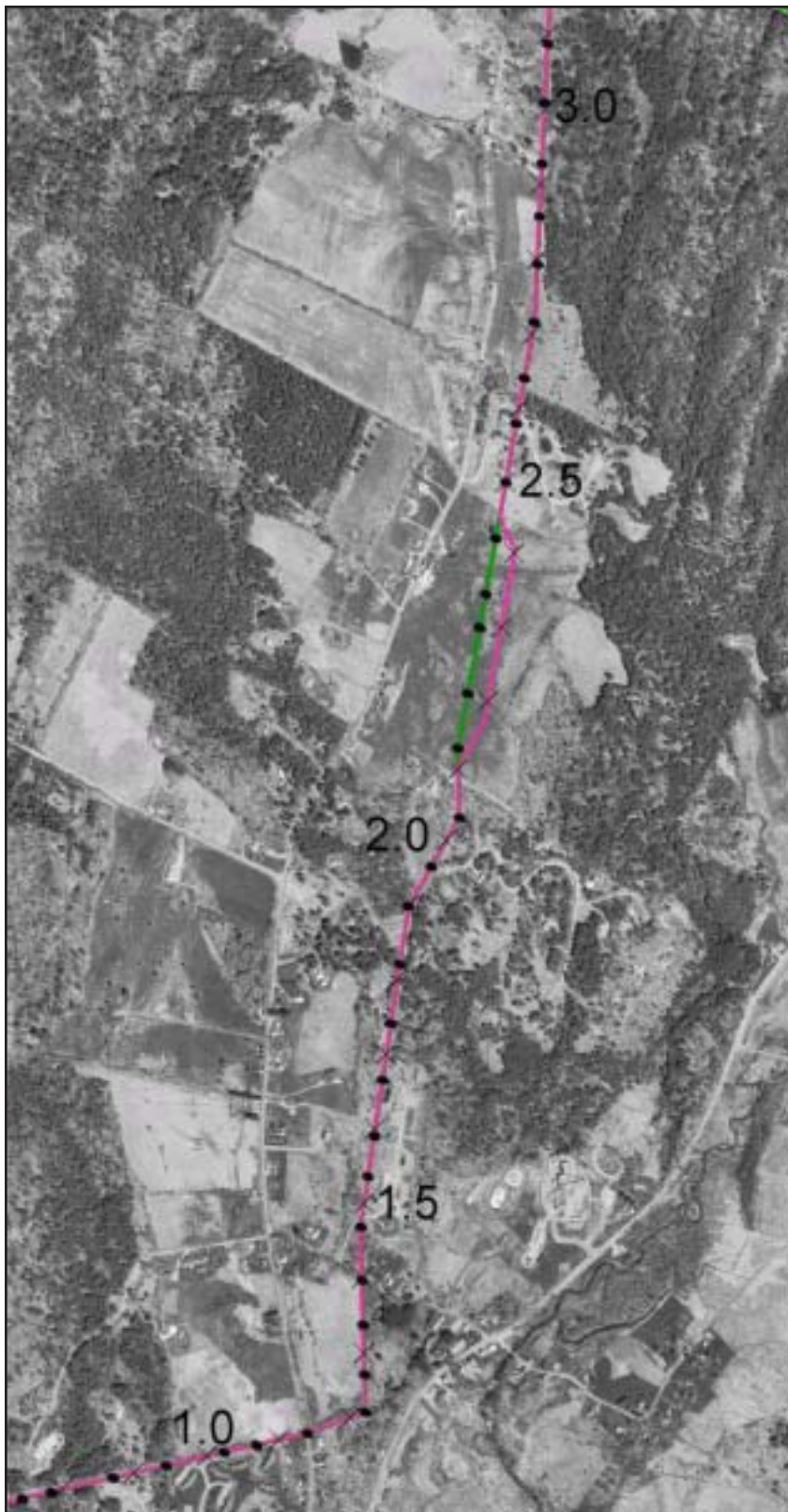
## Section 1: Proposed Duxbury Switching Station to Blush Hill Road Crossing

DPS-DR-1



**Approx.  
Mile 1.1  
- 1.2**

View south on Blush Hill Rd. at crossing. Pole on east side of road is mitigated by trees at roadside. A higher pole at the crossing will create skylining. Poles need to be set back from road - some roadside screening may be desirable here.



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## Section 2: Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

DPS-DR-1



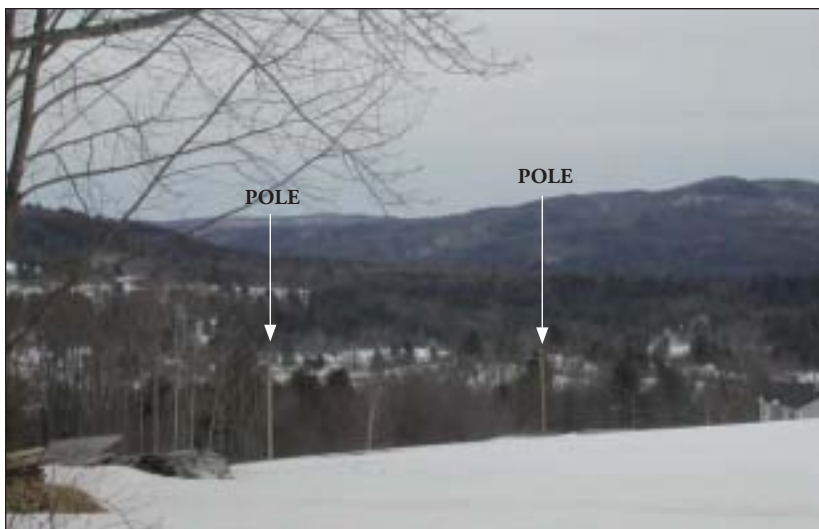
### Mile 1.2

View east from Blush Hill Rd. Pole is skylining with the Worcester Range as the backdrop. Obstruction of views and skylining is a concern here.



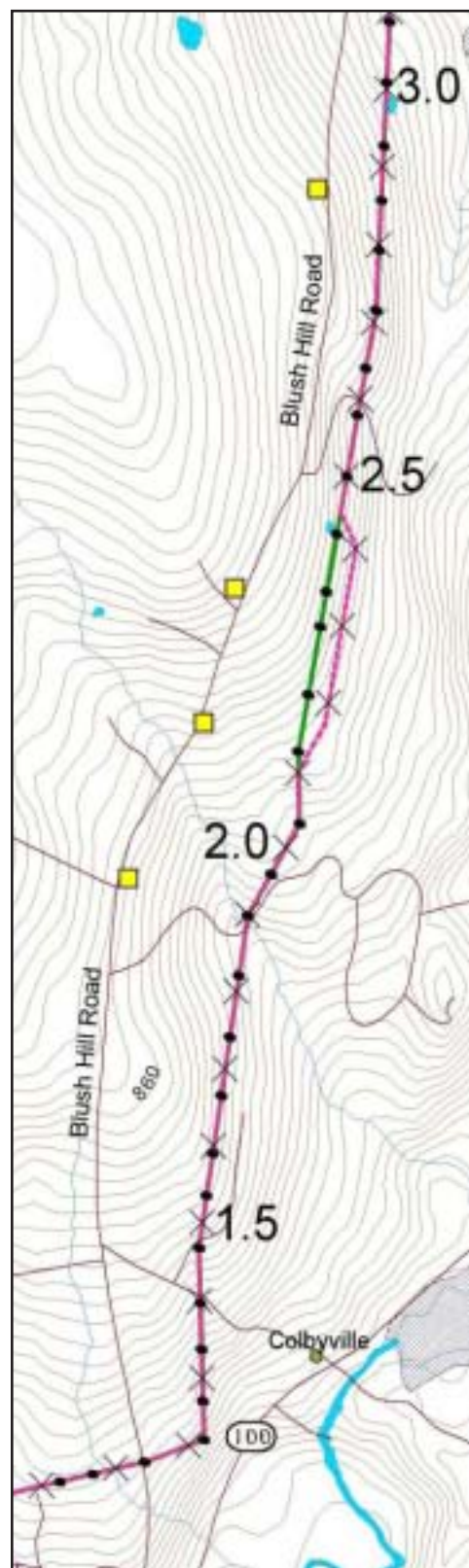
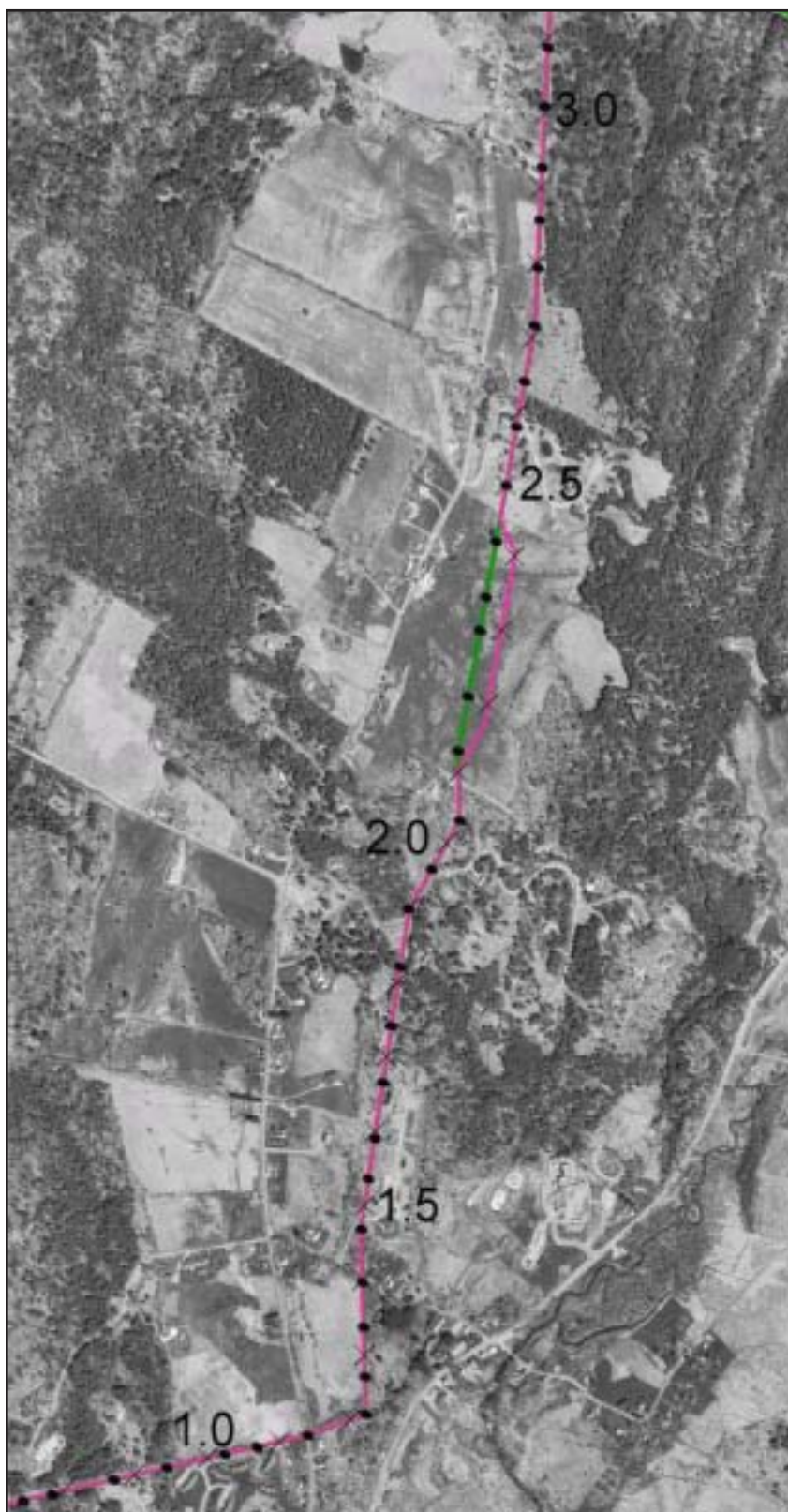
### Mile 1.2

View east from Blush Hill Rd. New construction along corridor.



### Mile 1.4

View south to corridor from Crossroads Rd.



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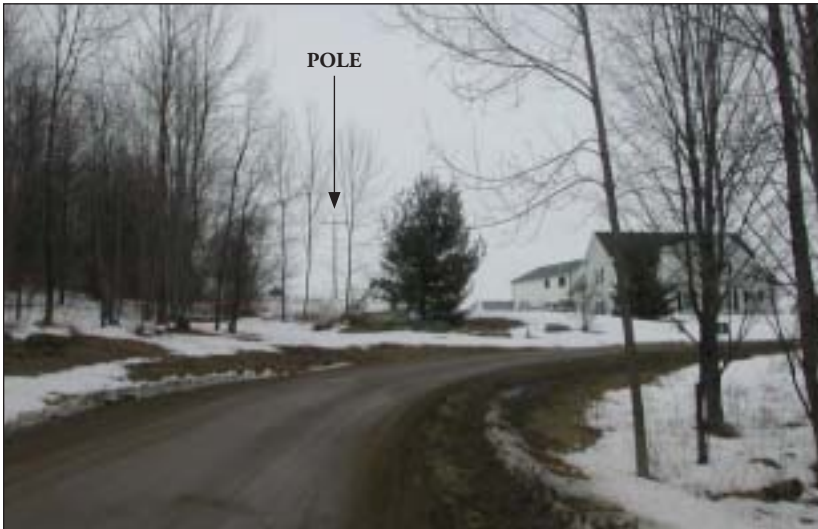
GIS Data from VCGI and VELCO. Data is only as accurate as the original source. LandWorks does not guarantee accuracy of this data.

## Section 2: Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

DPS-DR-1



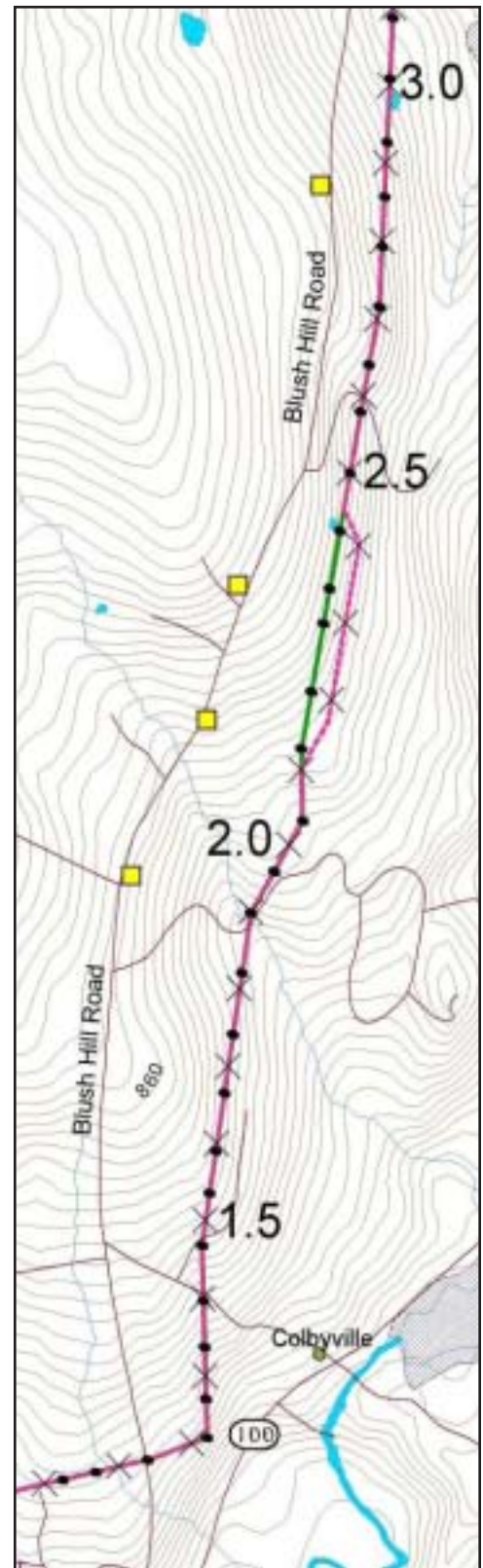
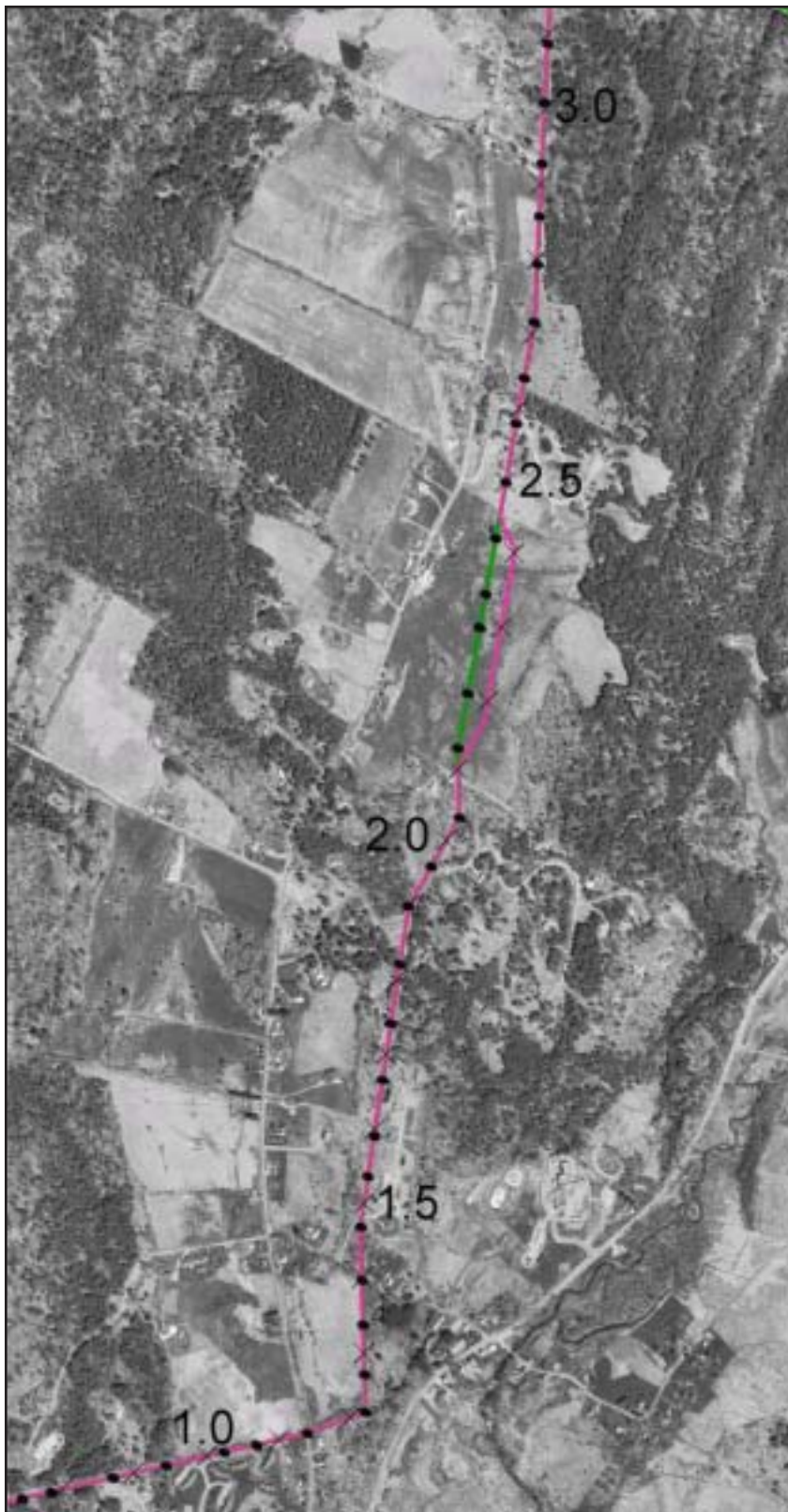
**Mile 1.4 - 1.5** View north at Meadow Crest. Line is assimilated into existing trees which must remain.



**Mile 1.4 - 1.5** View from Meadow Crest up corridor. More screening for road and around home will be necessary.



**Mile 1.6** View from Meadow Crest neighborhood. Line is uphill and behind homes while views are to the east. Large plantings behind the homes and carefully placed uphill could mitigate the visual impact here.



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## Section 2: Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

DPS-DR-1



**Approx.  
Mile 1.7**

View from Meadow Crest neighborhood. Line is uphill and behind homes. The line is well integrated, into the landscape, and will continue to be required for the new structures, to accomplish the same necessary mitigation.



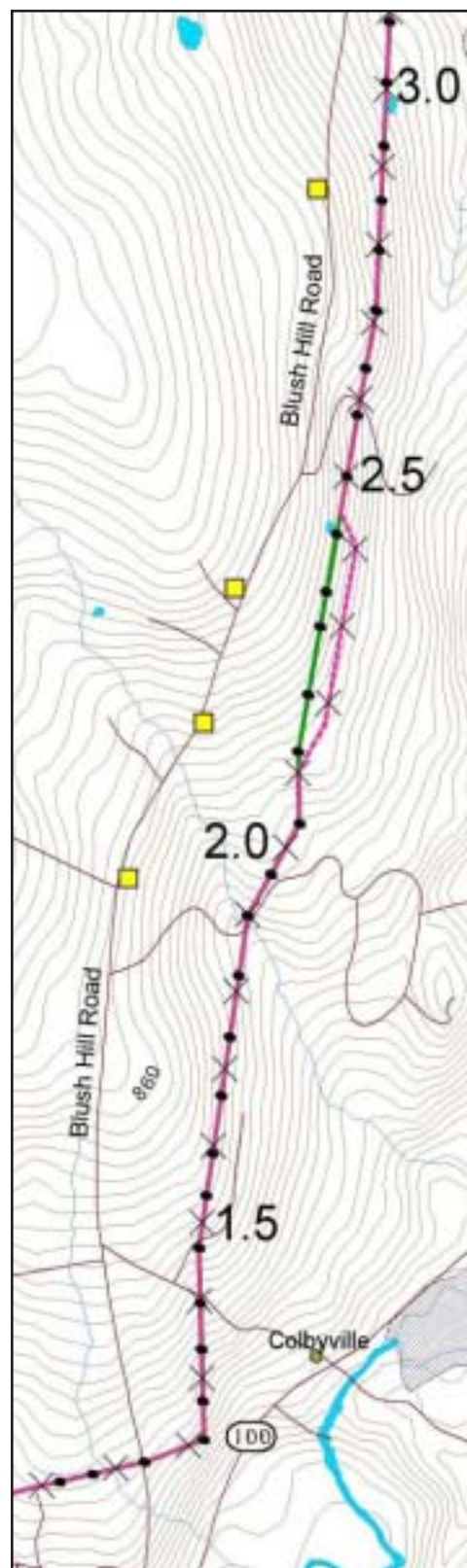
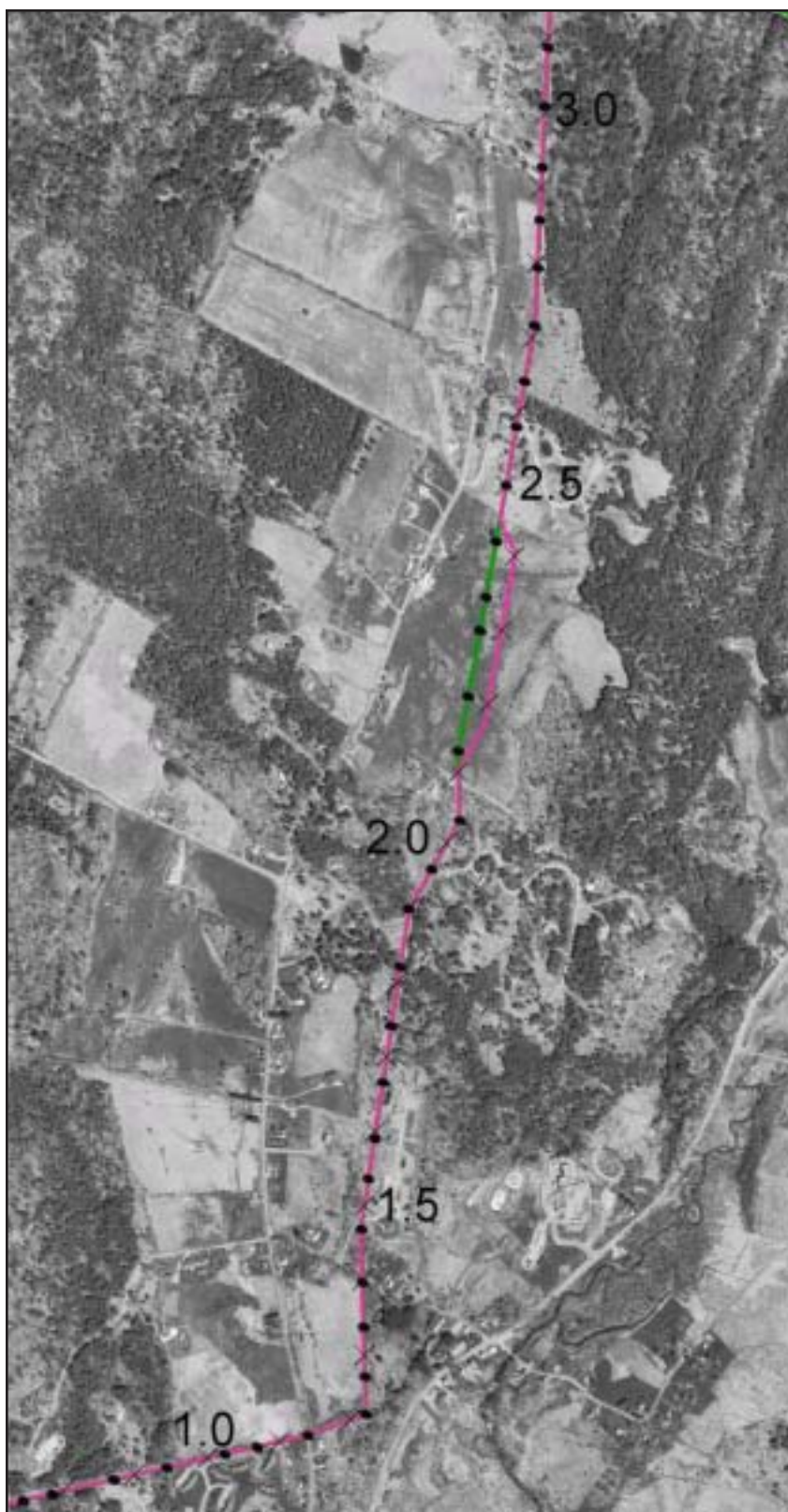
**Mile 1.9**

View down corridor at Countryside Estates crossing. Current structures are at the same height as the trees, new structures will exceed tree heights.



**Mile 1.9**

View up corridor at Countryside Estates crossing. Current structures are at the same height as the trees.



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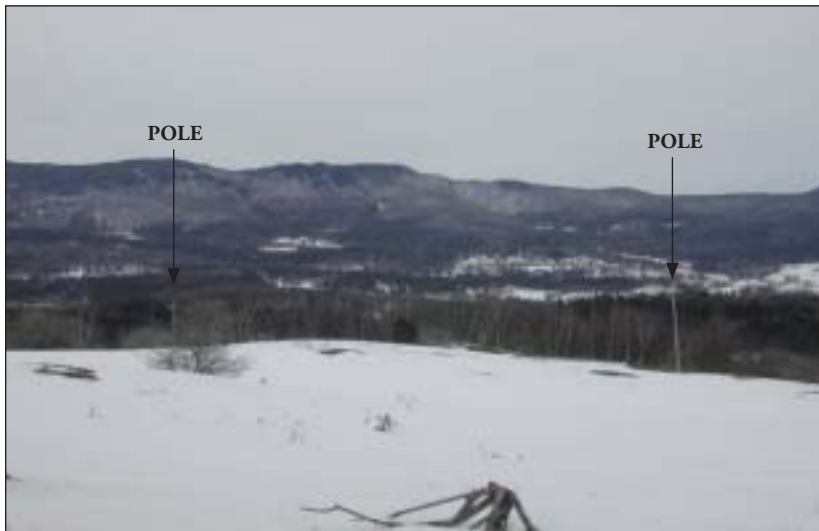
## Section 2: Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

DPS-DR-1



**Approx.  
Mile 2.0**

Corridor return to view from  
Blush Hill Rd. around mile 2.0



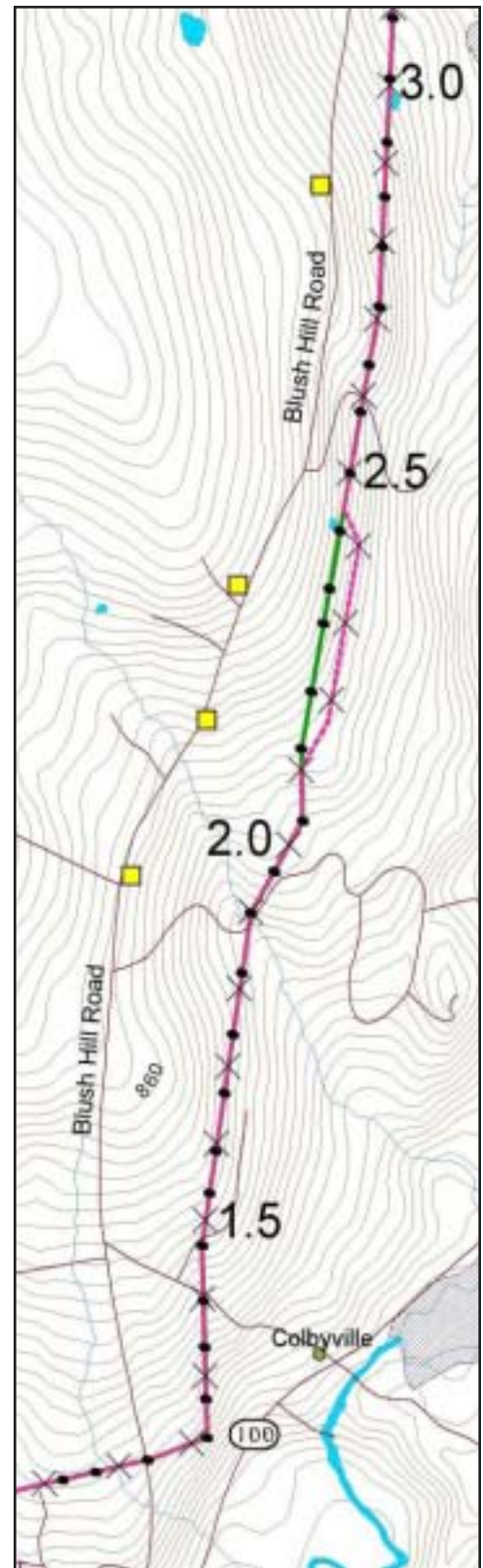
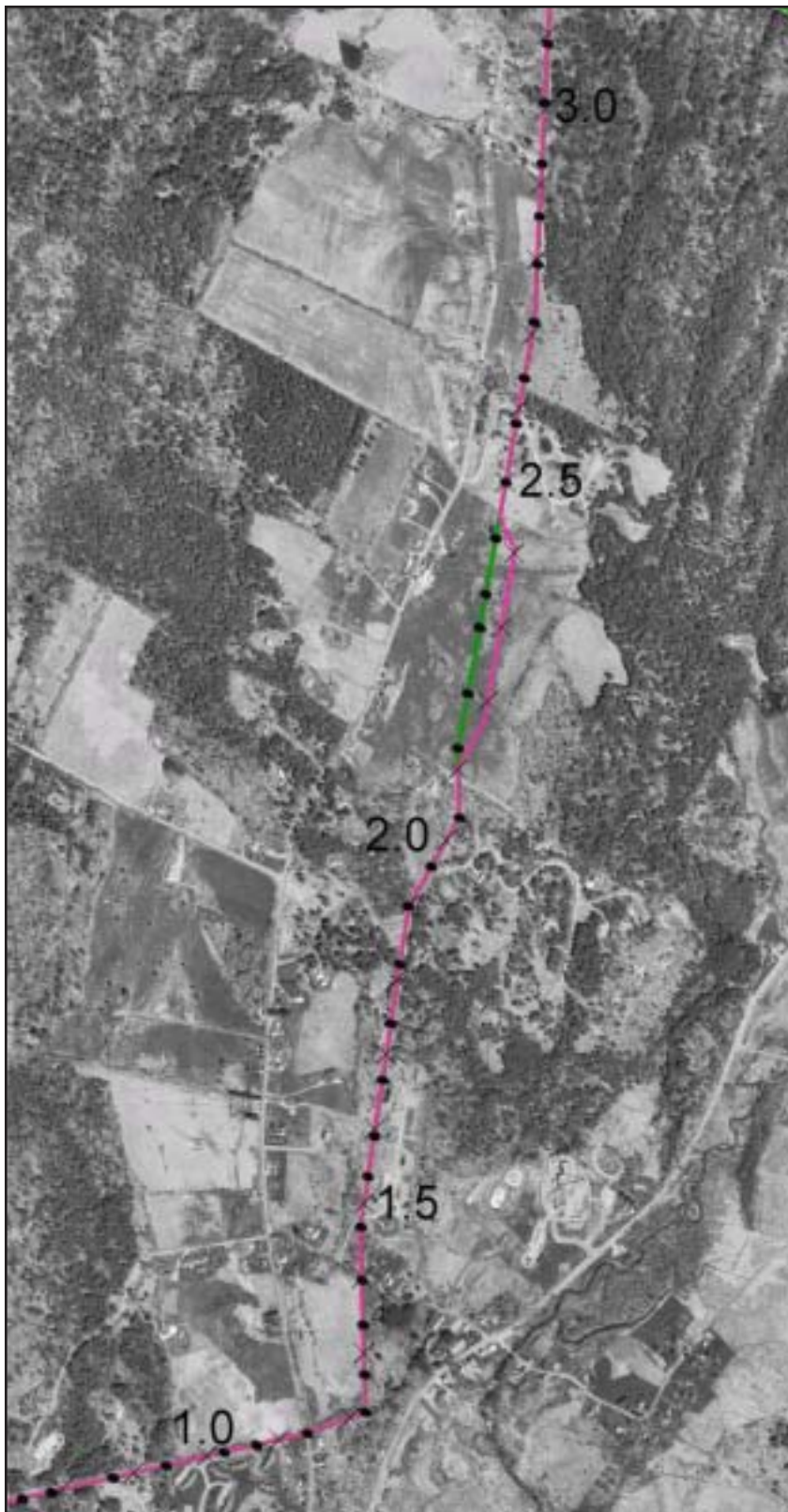
**Approx.  
Mile 2.1  
- 2.3**

Existing lines are visible at the  
edge of the open field. Views of  
the Worcester Range. Reroute  
proposed for this section (mile  
2.1 to 2.3). This is a highly sce-  
nic area with spectacular views  
to the east (and is viewed from  
the east side of Waterbury).



**Approx.  
Mile 2.3**

Historic former dairy farm silo  
with existing line in the open  
field / pasture. An alternative  
rerouting to what VELCO pro-  
posed is recommended here to  
avoid an undue adverse impact.

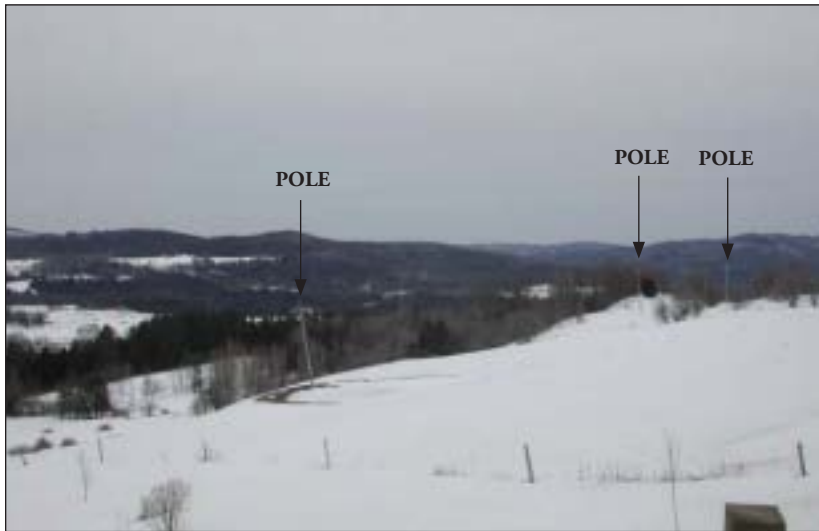


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## Section 2: Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

DPS-DR-1



**Approx.  
Mile 2.4  
- 2.5**

The proposed reroute will return to the existing corridor in this vicinity.



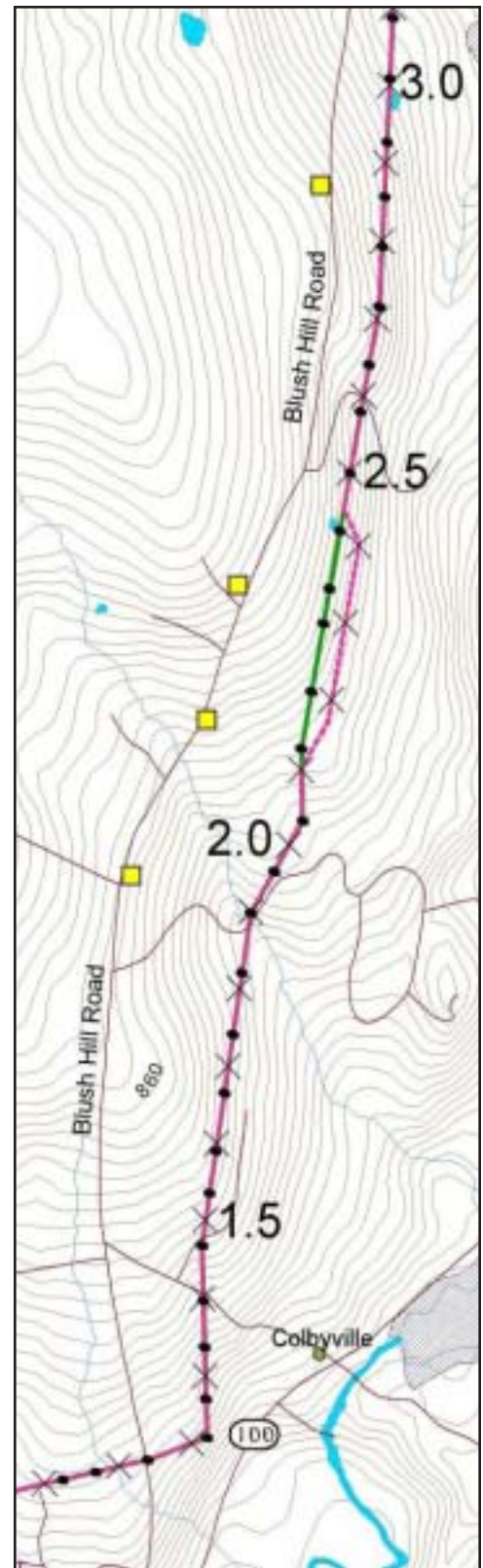
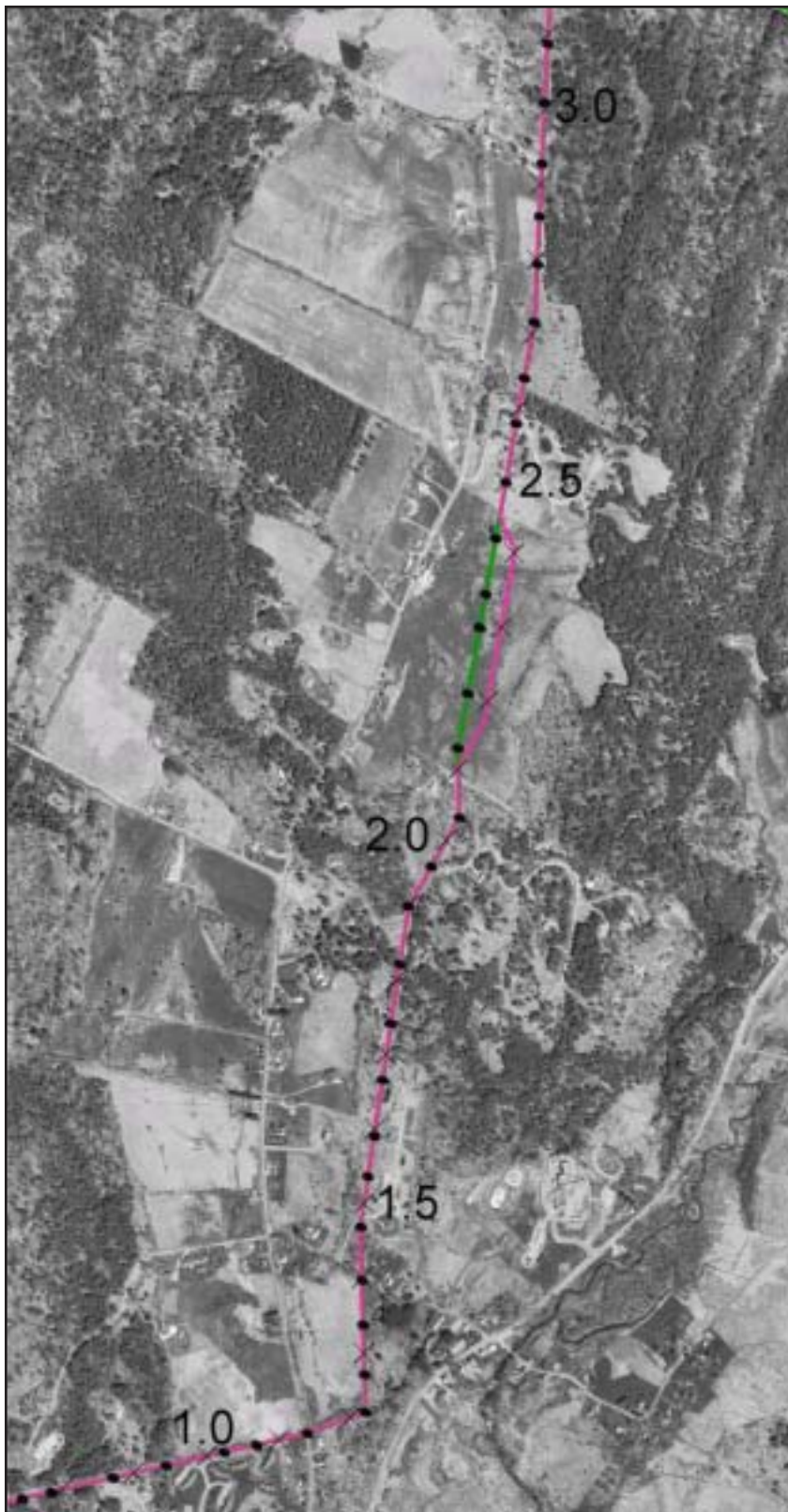
**Mile 2.6**

View down corridor from crossing at Blush Hill estates. Existing pine trees on side of corridor help assimilate the existing line.



**Mile 2.6**

View up corridor from crossing at Blush Hill Estates. Desirable pole location (not too close to road).



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## Section 2: Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

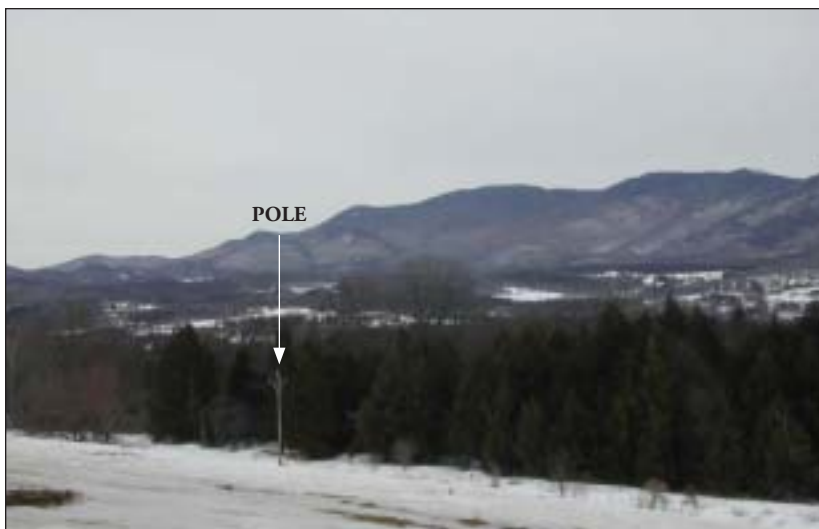
DPS-DR-1



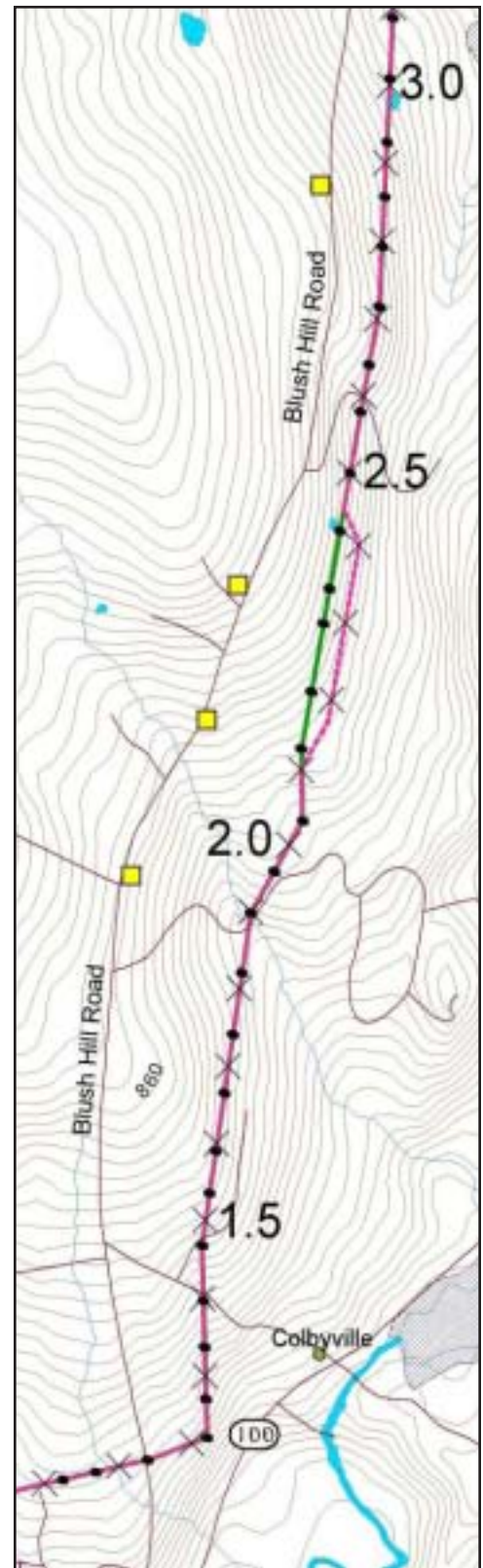
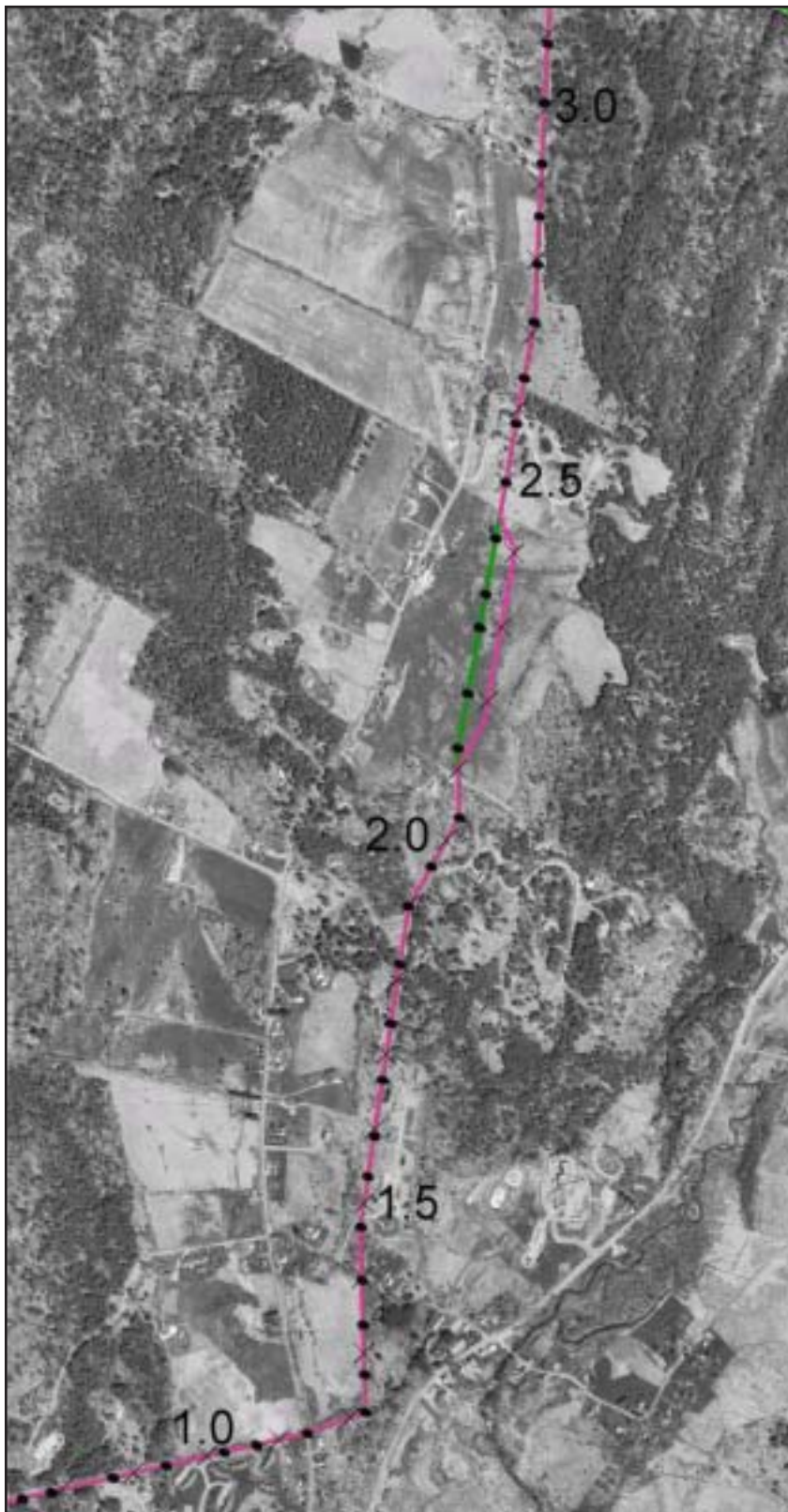
**Approx.  
Mile 2.6  
- 2.7** View along Blush Hill Rd.  
where corridor is visible again  
(approximately mile 2.6).



**Approx.  
Mile 2.7  
- 2.8** View east to existing corridor.  
Higher poles will result in  
skylining. This is a very sensitive  
area.



**Approx.  
Mile 2.8  
- 2.9** New poles should be below  
treeline so as not to exceed  
height of trees, which provide  
critical "backgrounding".



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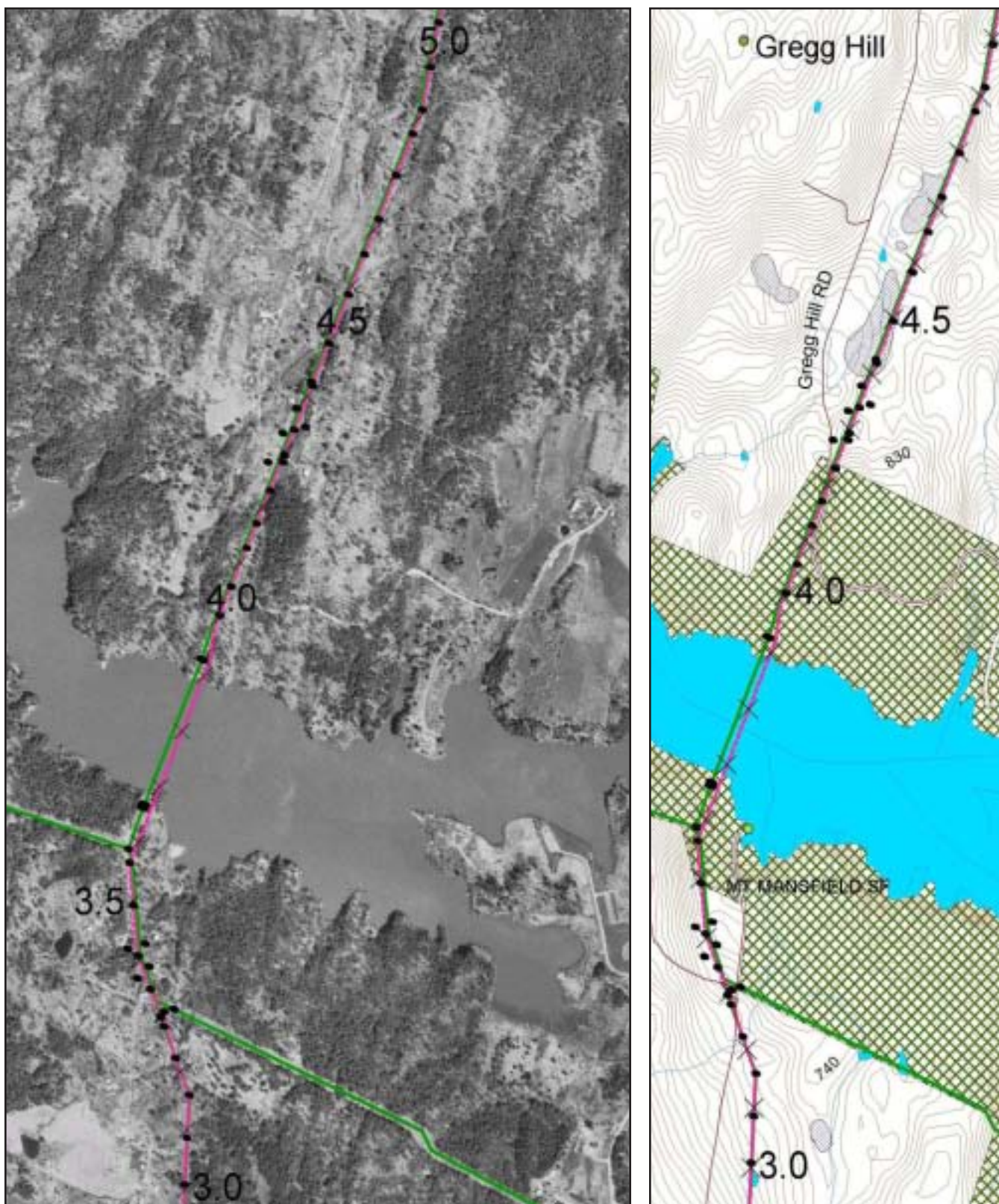
## Section 2: Along Blush Hill Rd. to Second Blush Hill Rd. Crossing

DPS-DR-1



### Mile 2.9

Pole is located close to home. Corridor drops out of view. Approximately mile 2.9



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### Section 3: Second Blush Hill Rd. Crossing to Southern End of Gregg Hill Rd.

DPS-DR-1



#### Mile 3.2

Looking southeast down the corridor at the second Blush Hill Rd. crossing. Poles traverse side road.



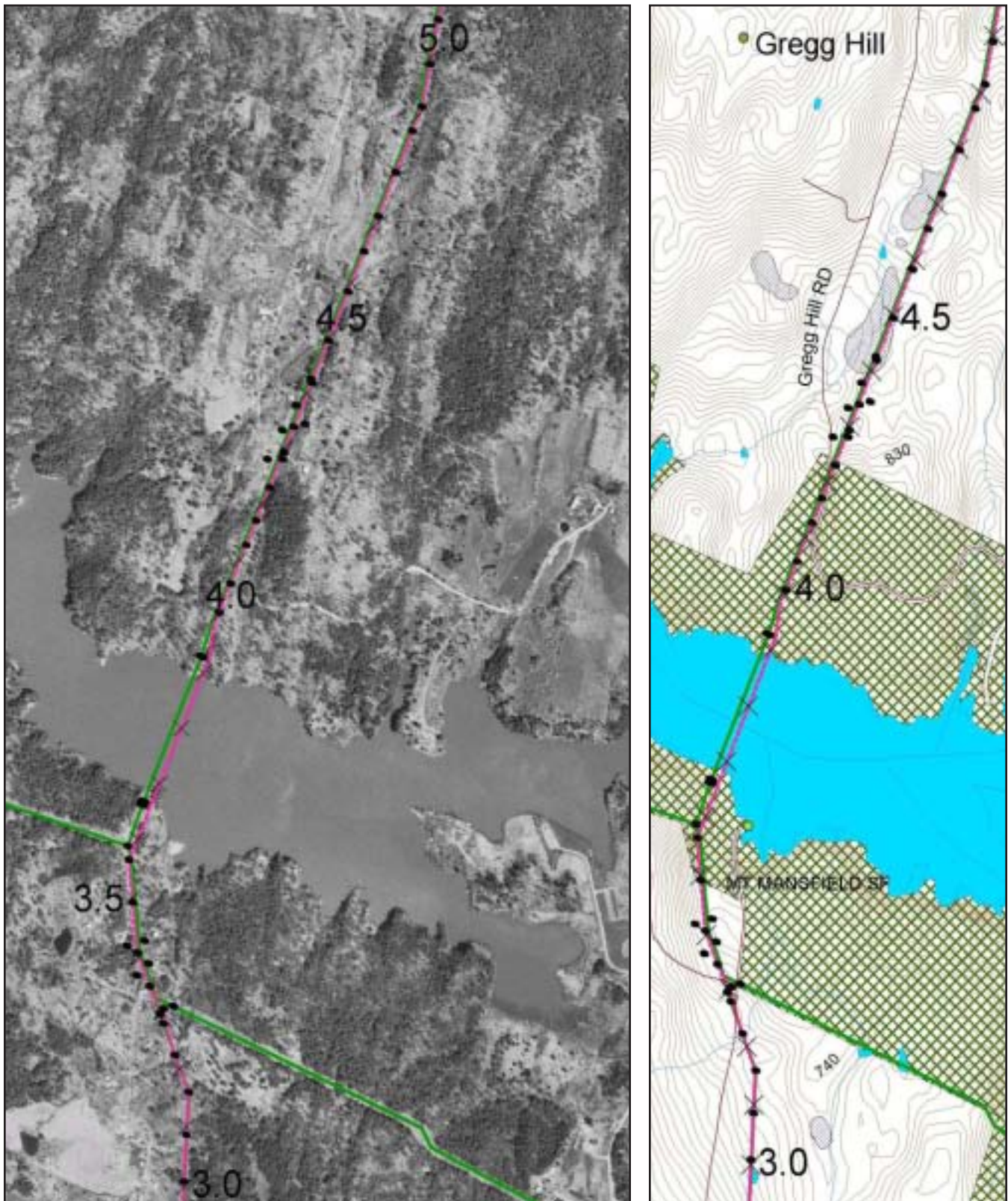
#### Mile 3.2

The poles on the northwest side of Blush Hill Rd. block views of the mountains made available by the clearing. The pole is located close to the road, and the large structure is too visible - more screening is desirable.



#### Mile 3.3

The line passes in front and in back of homes along Blush Hill Rd. This home on Michigan Ave. faces the transmission corridor.



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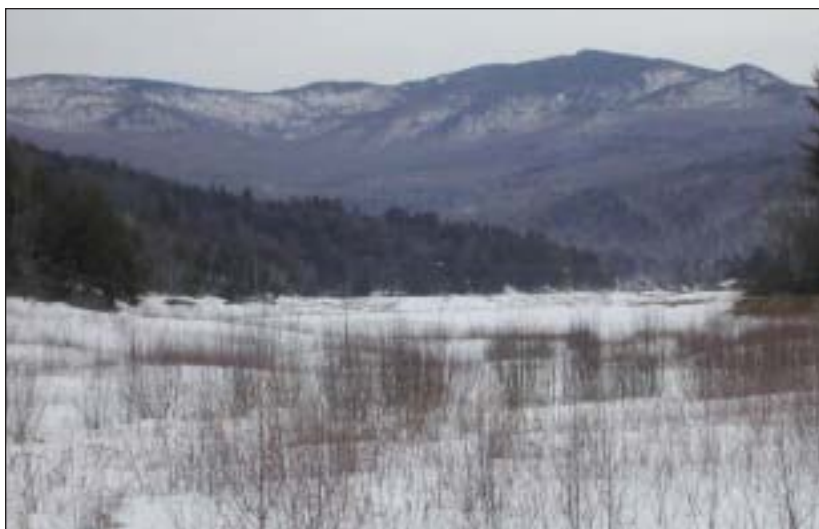
### Mile 3.6

View of the transmission corridor from the Blush Hill access area across Waterbury Reservoir. The widening of the corridor and subsequent cut on the hill-side will substantially impact the appearance of the corridor and its "cut" from the boat launch. This section with the addition of a new line and corresponding structures up to Mile 4.0 will result in an undue adverse impact to the reservoir and its users.



### Mile 3.6

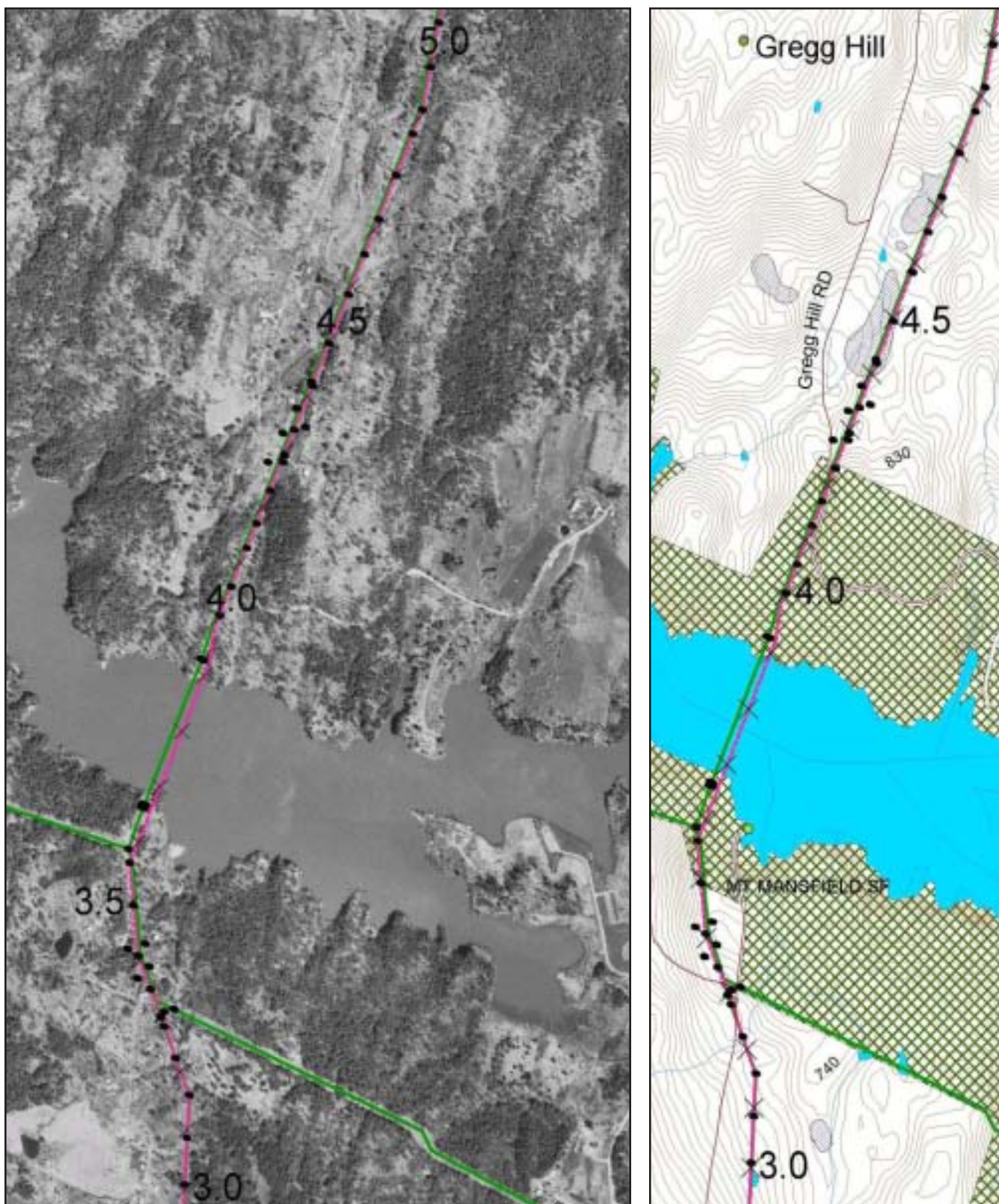
Telephoto view of the corridor, pole structure, lines, and marker balls from the Blush Hill access area. The 34.5 kV and 115 kV pole structures will reach above the treeline.



### Mile 3.7 - 3.9

View of transmission lines crossing Waterbury Reservoir from the head of the reservoir at Waterbury Center State Park. Lines and marker balls are highly visible.

Note: See more extensive description and analysis in previous section with mitigation recommendations.



Numbers on Map represent Mile Markers on the proposed line upgrade; Shaded overlays represent Conserved Public and Private Lands, Deer Wintering Habitat, Historic Districts, Sites or Buildings, and Wetlands; Proposed line shown in red.

GIS Data from VCGI and VELCO. Data is only as accurate as the original source. LandWorks does not guarantee accuracy of this data.

### Section 3: Second Blush Hill Rd. Crossing to Southern End of Gregg Hill Rd.

DPS-DR-1



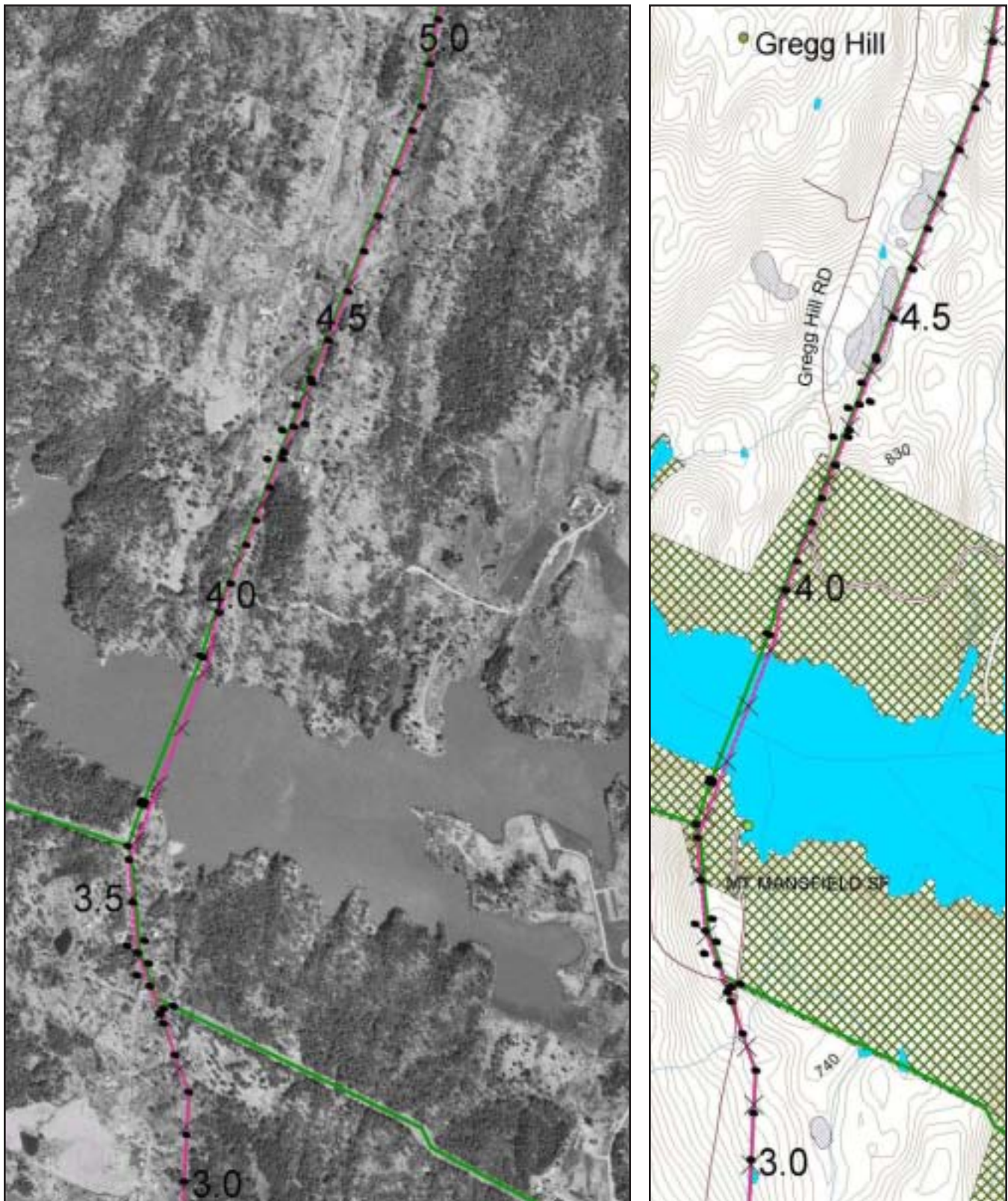
**Mile 3.7 - 3.9** View of transmission lines crossing Waterbury Reservoir from Waterbury Center State Park Day Use area. Transmission line and marker balls are highly visible.



**Mile 4.1** At the southern end of Gregg Hill Rd. new screening and existing vegetation are critical for northbound travelers.



**Mile 4.1** Looking north at the crossing the lines are right in view. Background vegetation is critical and must be kept.



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### Section 3: Second Blush Hill Rd. Crossing to Southern End of Gregg Hill Rd.

DPS-DR-1



**Mile 4.2**

View northeast up the line. Pole is uphill from road and prominent in view with no screening.



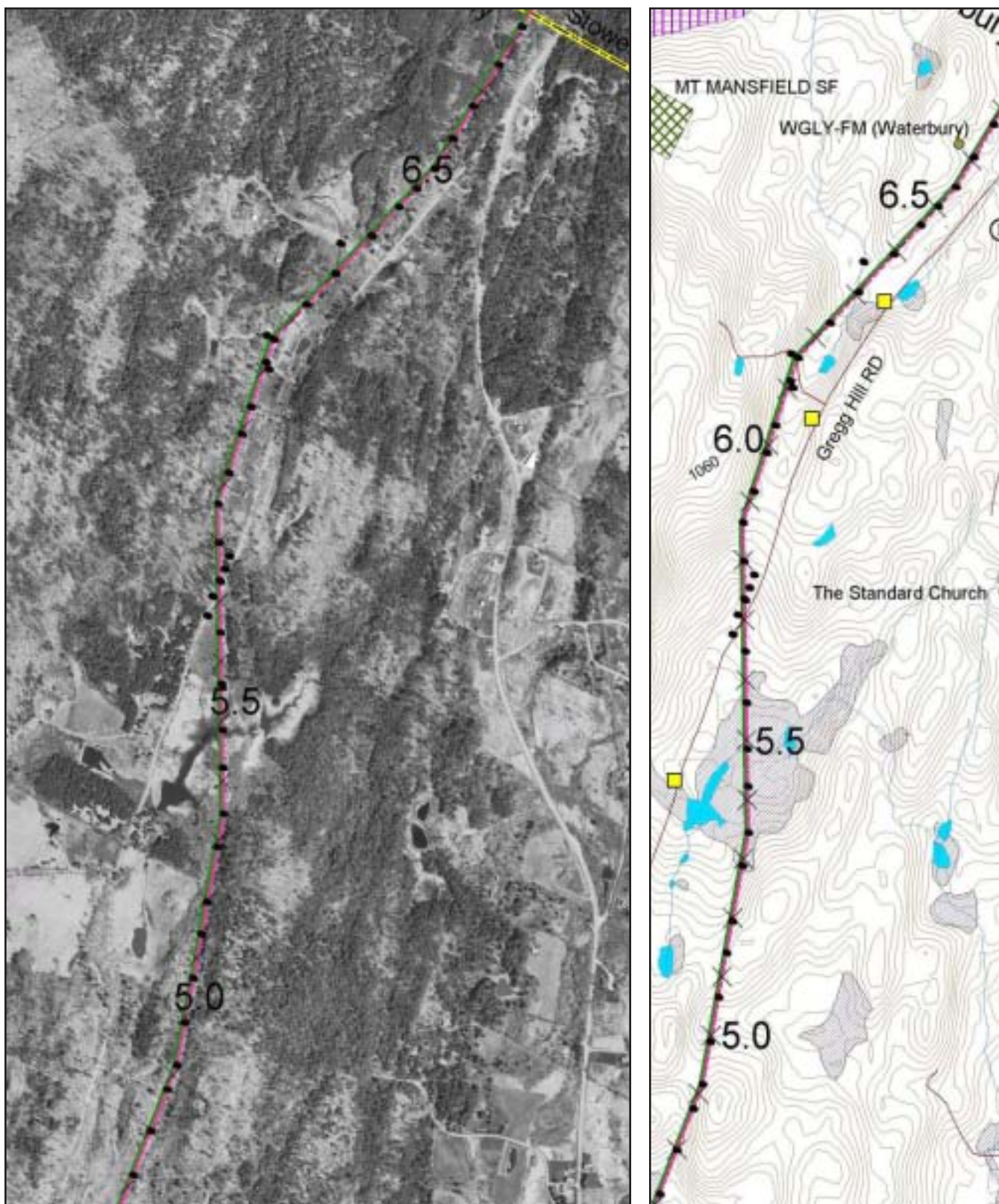
**Mile 4.3**

Sweep of line through neighborhood on Gregg Hill Rd. Distribution lines are in the foreground while the transmission lines are in the background.



**Mile 4.3**

Along Gregg Hill Rd. the topography, open fields, and woods help to assimilate poles.



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**Mile 4.6**

Thin veneer along Gregg Hill Rd. de-emphasizes the line in winter and will hide the line in summer.



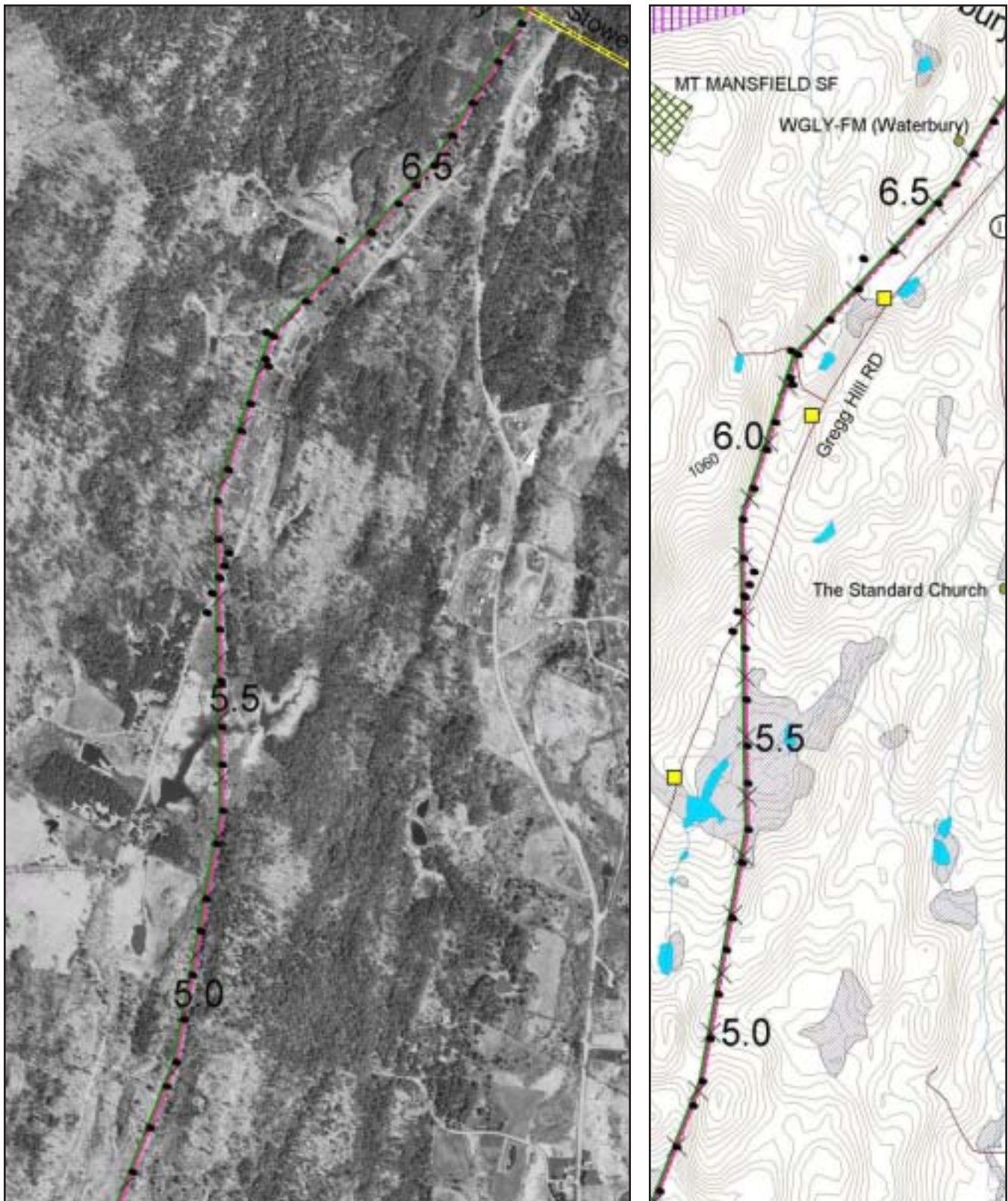
**Mile 4.8**

Traveling north on Gregg Hill Rd. View of line across open field. Background vegetation helps assimilate line except at height of land.



**Mile 4.8**

Line and pole can be seen in the distance but are well screened by the foreground vegetation.

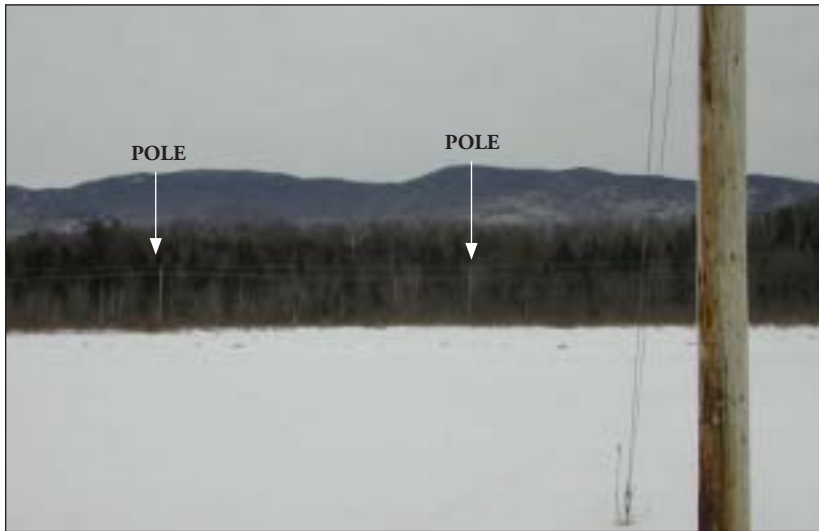


Numbers on Map represent Mile Markers on the proposed line upgrade; Shaded overlays represent Conserved Public and Private Lands, Deer Wintering Habitat, Historic Districts, Sites or Buildings, and Wetlands; Proposed line shown in red.

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## Section 4: Along Gregg Hill Rd. to Stowe Town Line

DPS-DR-1



**Approx.  
Mile 5.4  
- 5.5**

Along Gregg Hill Rd. The line is in the distance on an open field with Worcester Range in the background. Highly scenic area but distribution line is in foreground. Roadside trees would be desired mitigation to buffer the views of structures.



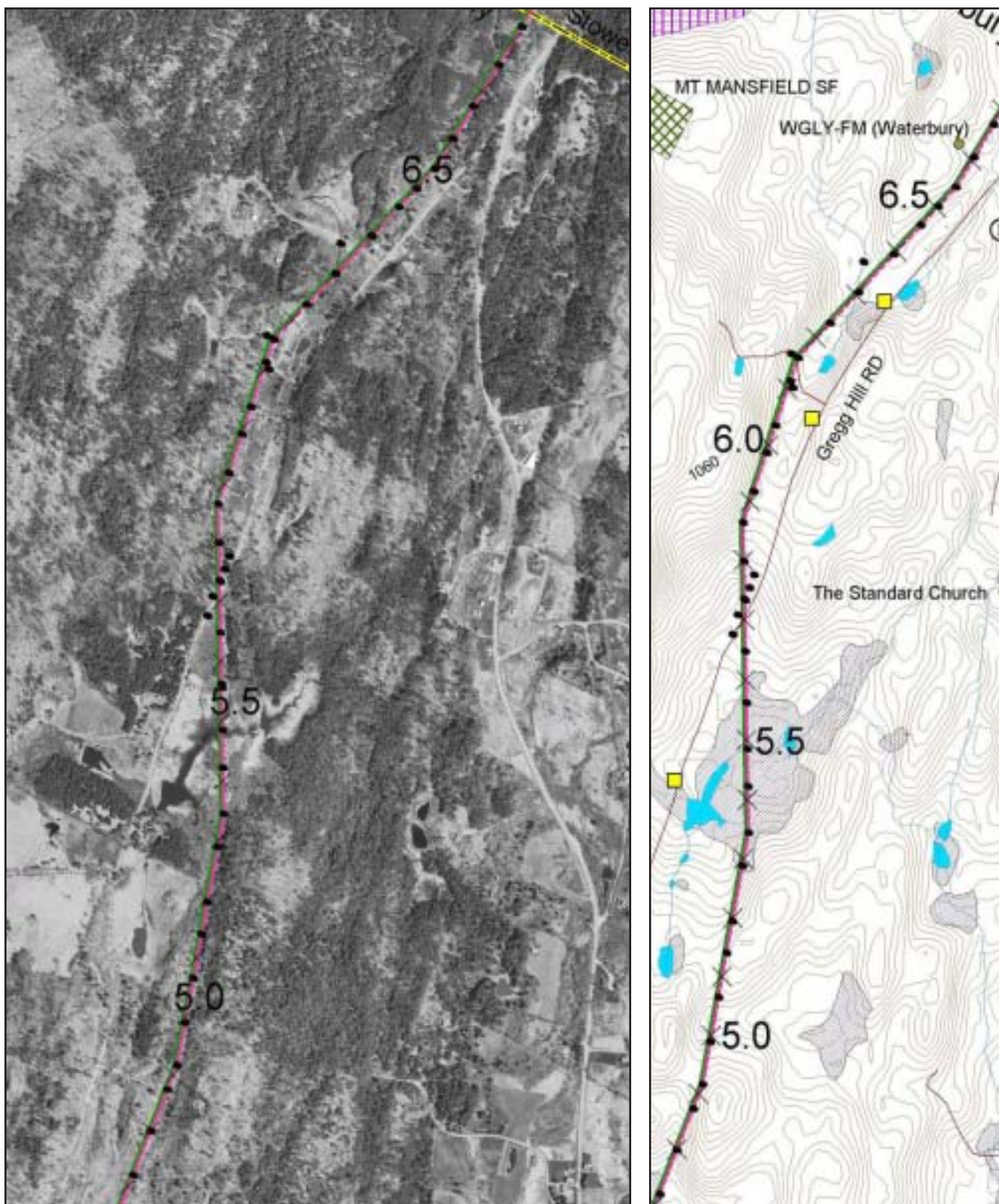
**Approx.  
Mile 5.4  
- 5.5**

The existing line is currently backgrounded by the treeline; this must continue with new structures - backgrounding by treeline not the mountains.



**Approx.  
Mile 5.5  
- 5.6**

Existing corridor is assimilated well in this location by surrounding vegetation.



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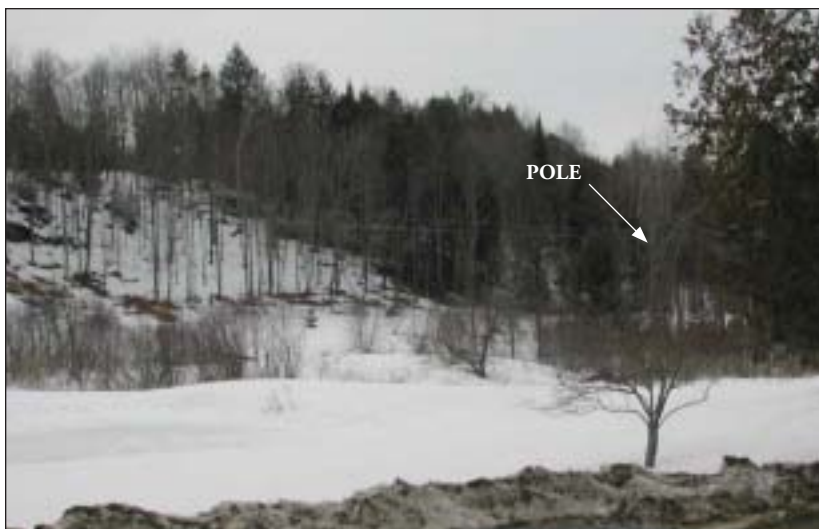
### Mile 5.7

View down corridor at second Gregg Hill Rd. crossing. The line is well assimilated. Fore-ground vegetation helps screen the corridor.



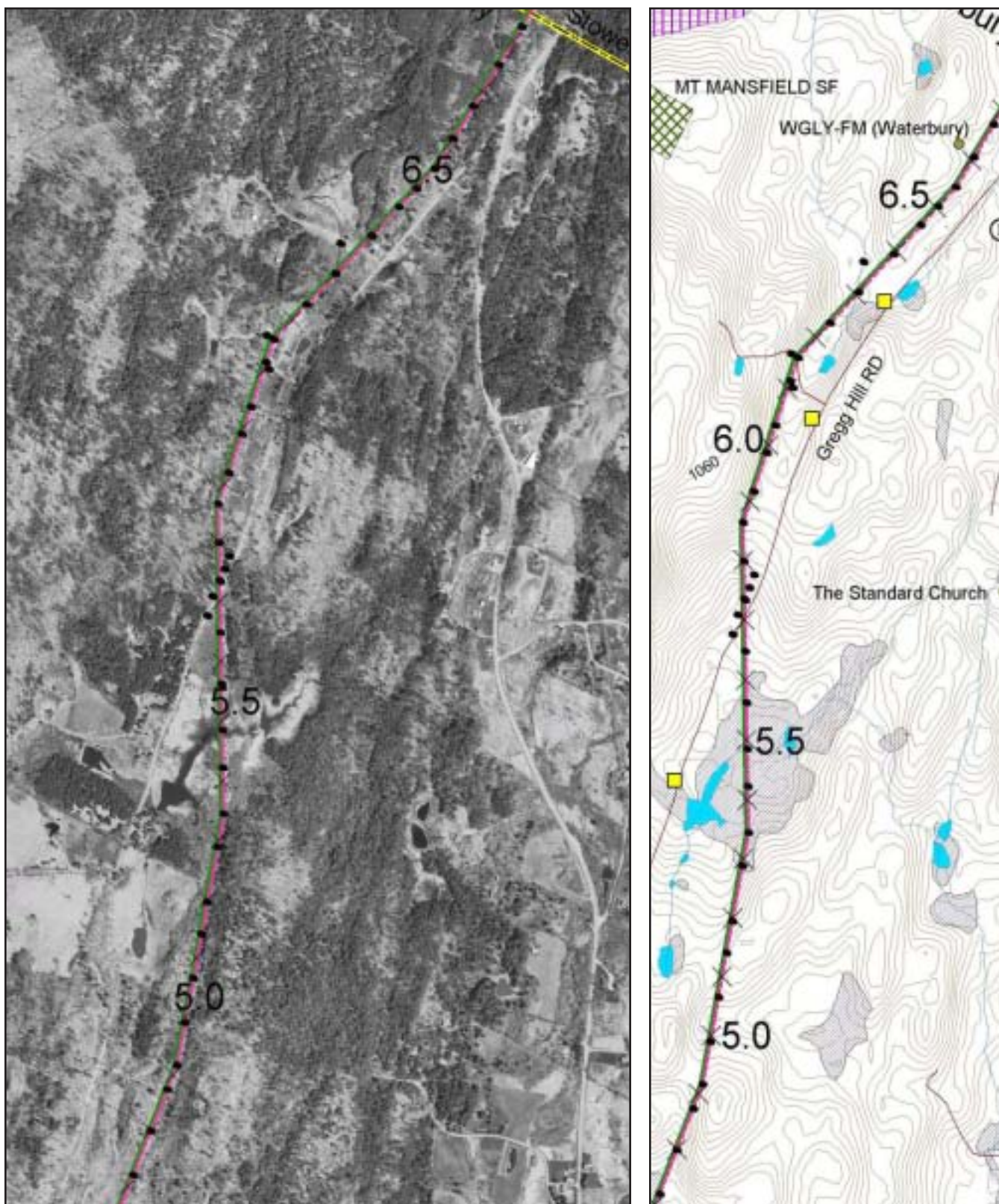
### Mile 5.7

View up corridor at second Gregg Hill Rd. crossing. Distribution line along road.



### Mile 6.0

The existing corridor is east of the residences along Gregg Hill Rd. Vegetation in foreground must be retained, and in some instances, added to.



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GIS Data from VCGI and VELCO. Data is only as accurate as the original source. LandWorks does not guarantee accuracy of this data.



### Mile 6.4

Existing corridor continues behind residences on Gregg Hill Rd. Vegetation is effective in winter in de-emphasizing the presence of the line and consequent visibility.



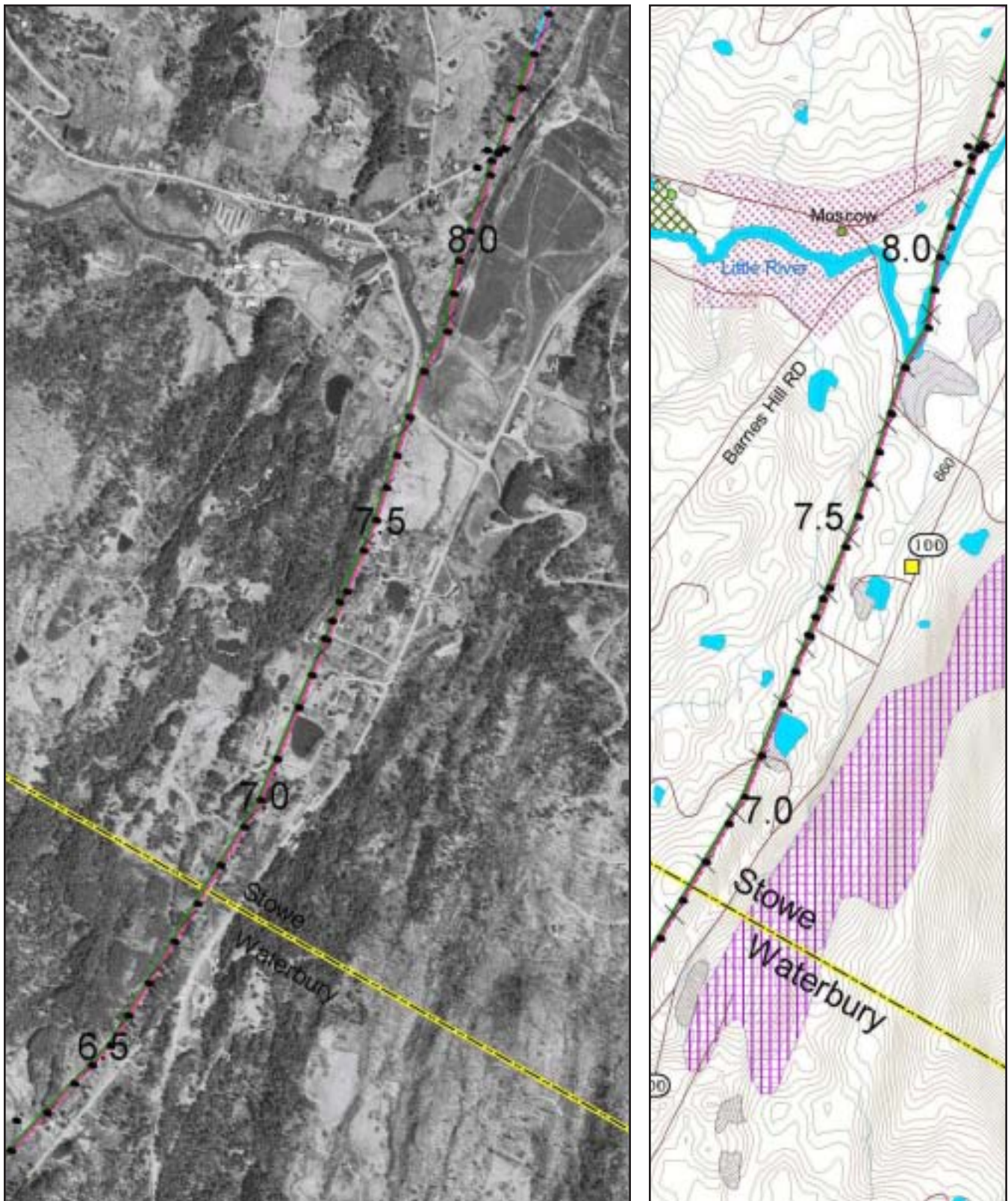
### Mile 6.4

Foreground vegetation along road is effective in screening the line and associated structures from view. This vegetation must be retained to avoid an undue adverse impact.



### Mile 6.5

With increased height and clearing proposed the visual impact of the line will increase. Mitigation is required.



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**Approx.  
Mile 6.9  
- 7.0**

View down corridor within the southern end of the Black Bear Run development.



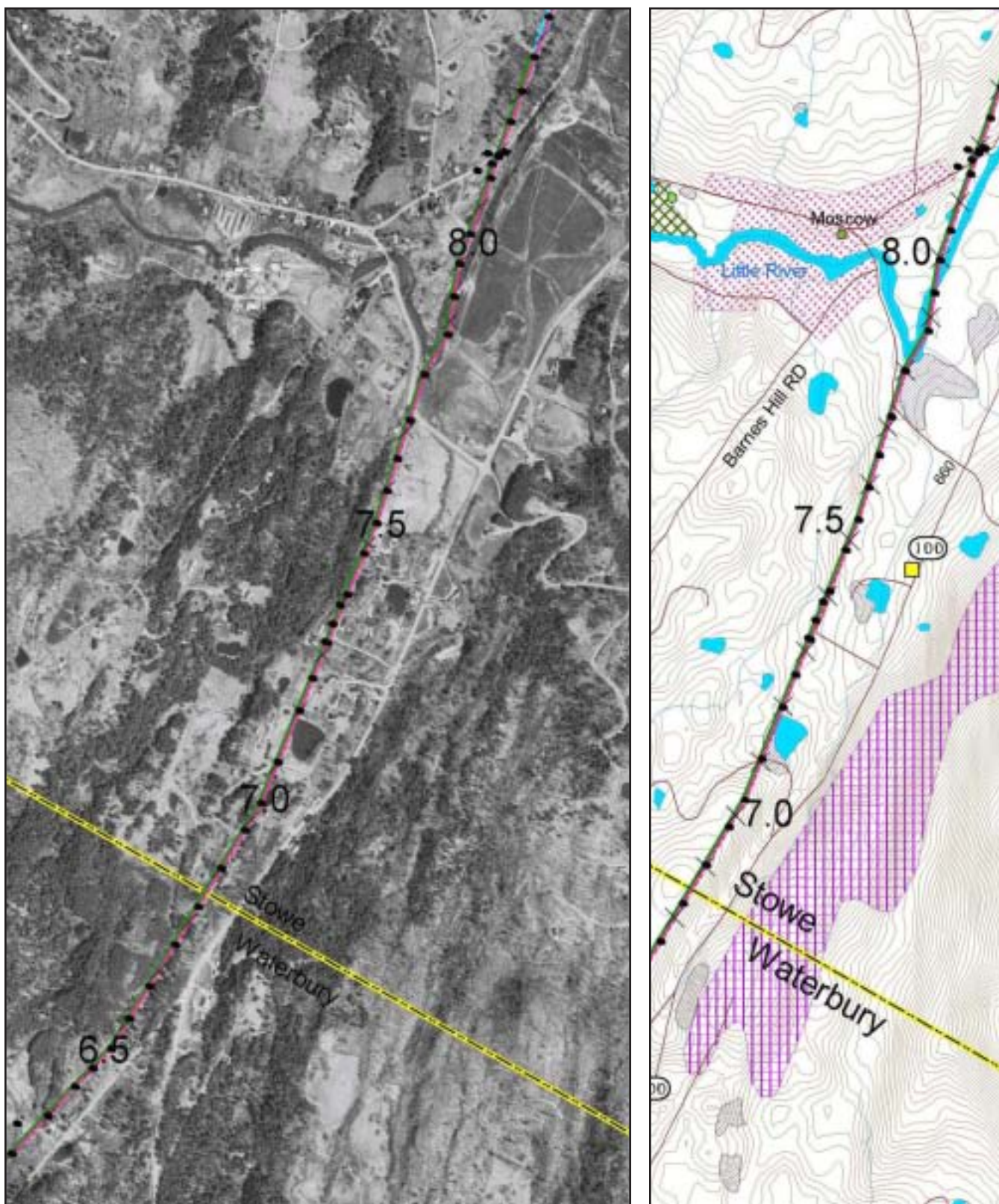
**Approx.  
Mile 6.9  
- 7.0**

View up corridor within the southern section of the Black Bear Run neighborhood.



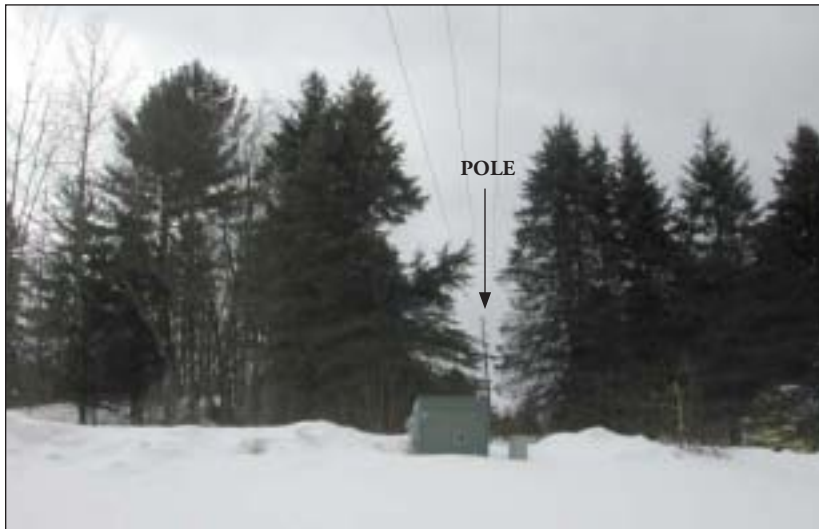
**Approx.  
Mile 6.9  
- 7.0**

Pole placement will be critical in this development due to several of the homes proximity to the corridor. Existing vegetation must be retained to avoid an undue adverse impact.



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**Mile 7.1**

View down corridor at entry to Black Bear run development. Existing higher pole and line mitigated by spruce row which must be retained.



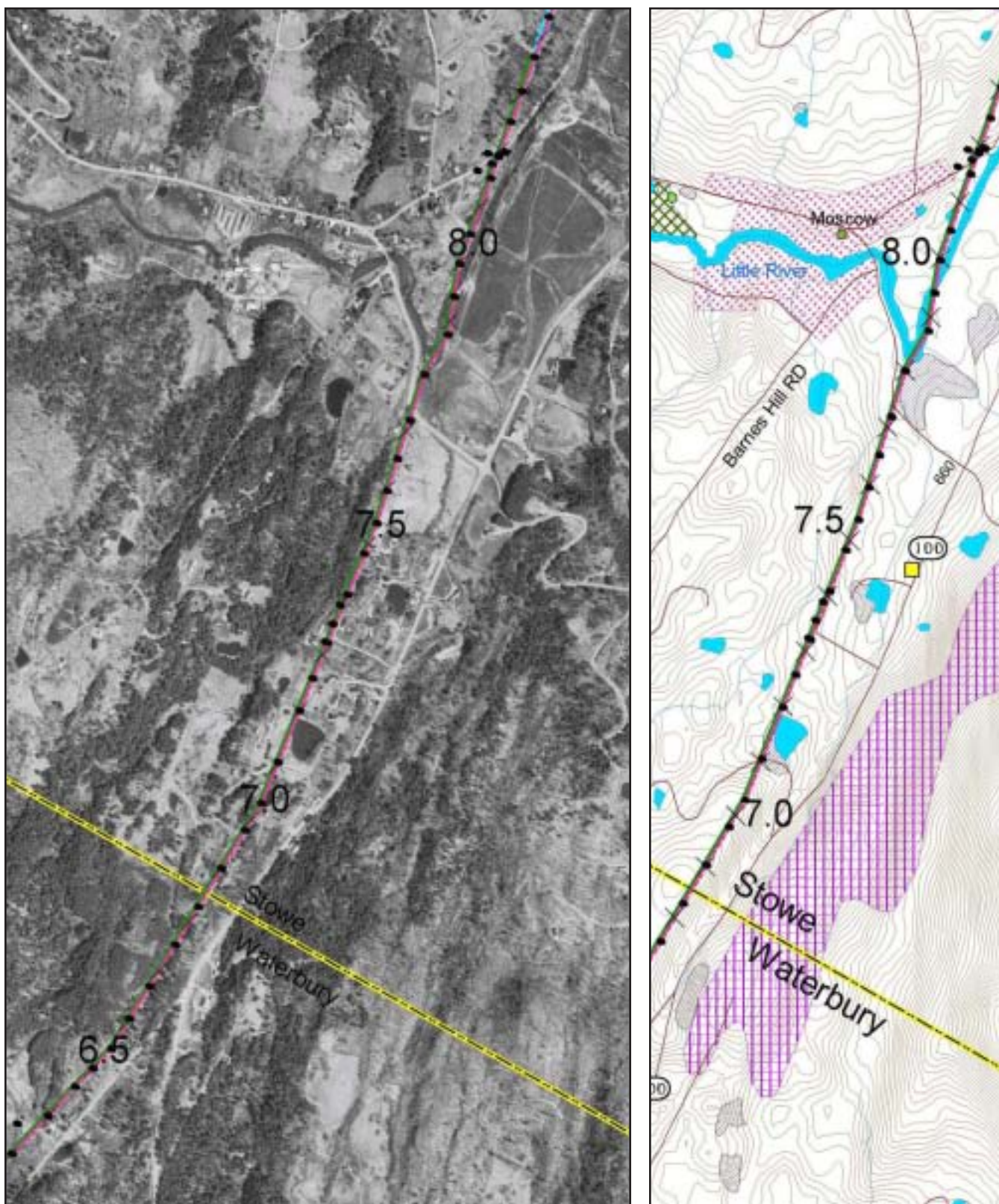
**Mile 7.1**

View of line crossing at Black Bear Run entry. Pole on north side of entry road is prominent in view entering or exiting the development, and needs to be relocated.



**Mile 7.1**

View up corridor at entry to Black Bear Run development. Corridor goes through community land and adjacent to pond. Some roadside / street trees planted here will limit an adverse impact.



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## Section 5: Stowe Town Line to Moscow Substation

DPS-DR-1



**Approx.  
Mile 7.2**

View of existing corridor from Storage in Stowe facility. Screening in foreground may be desired.



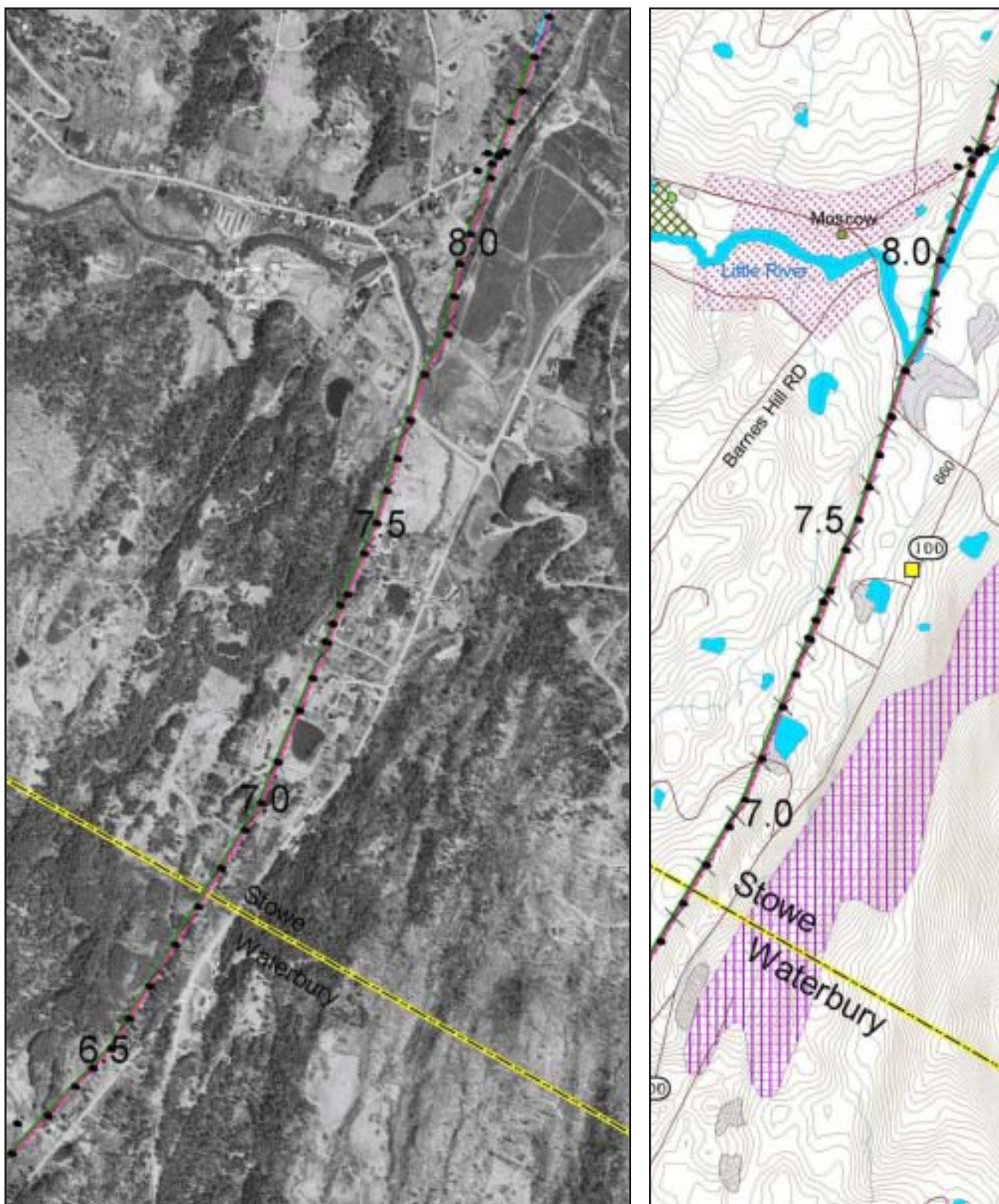
**Approx.  
Mile 7.3**

View down corridor on Marshall Rd. Distribution line adjacent to corridor.



**Approx.  
Mile 7.3  
- 7.4**

View up corridor from Marshall Rd. Proposed line will change the look and overall character of the neighborhood with its visual impact to the road and homes.



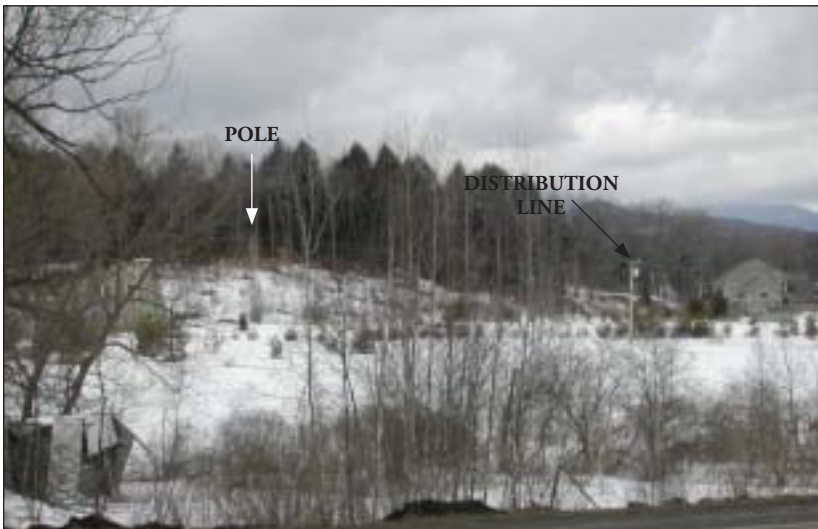
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GIS Data from VCGI and VELCO. Data is only as accurate as the original source. LandWorks does not guarantee accuracy of this data.



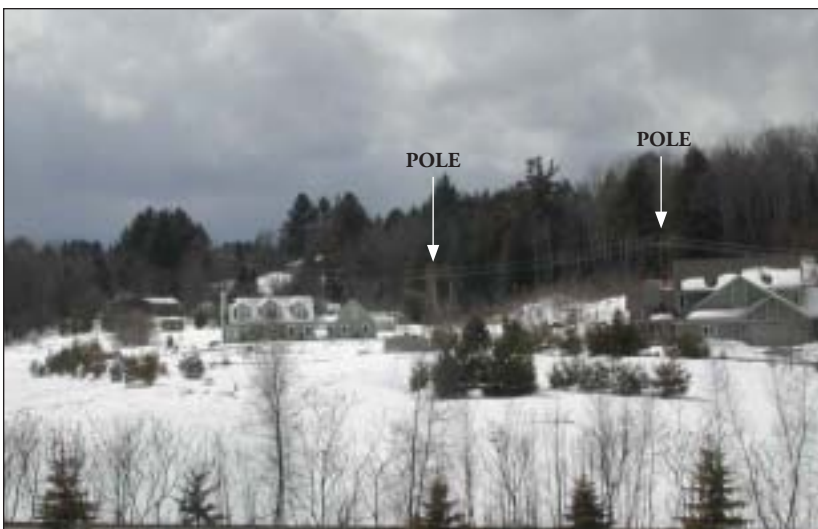
**Mile 7.4**

View of corridor from northern end of Marshall Rd.



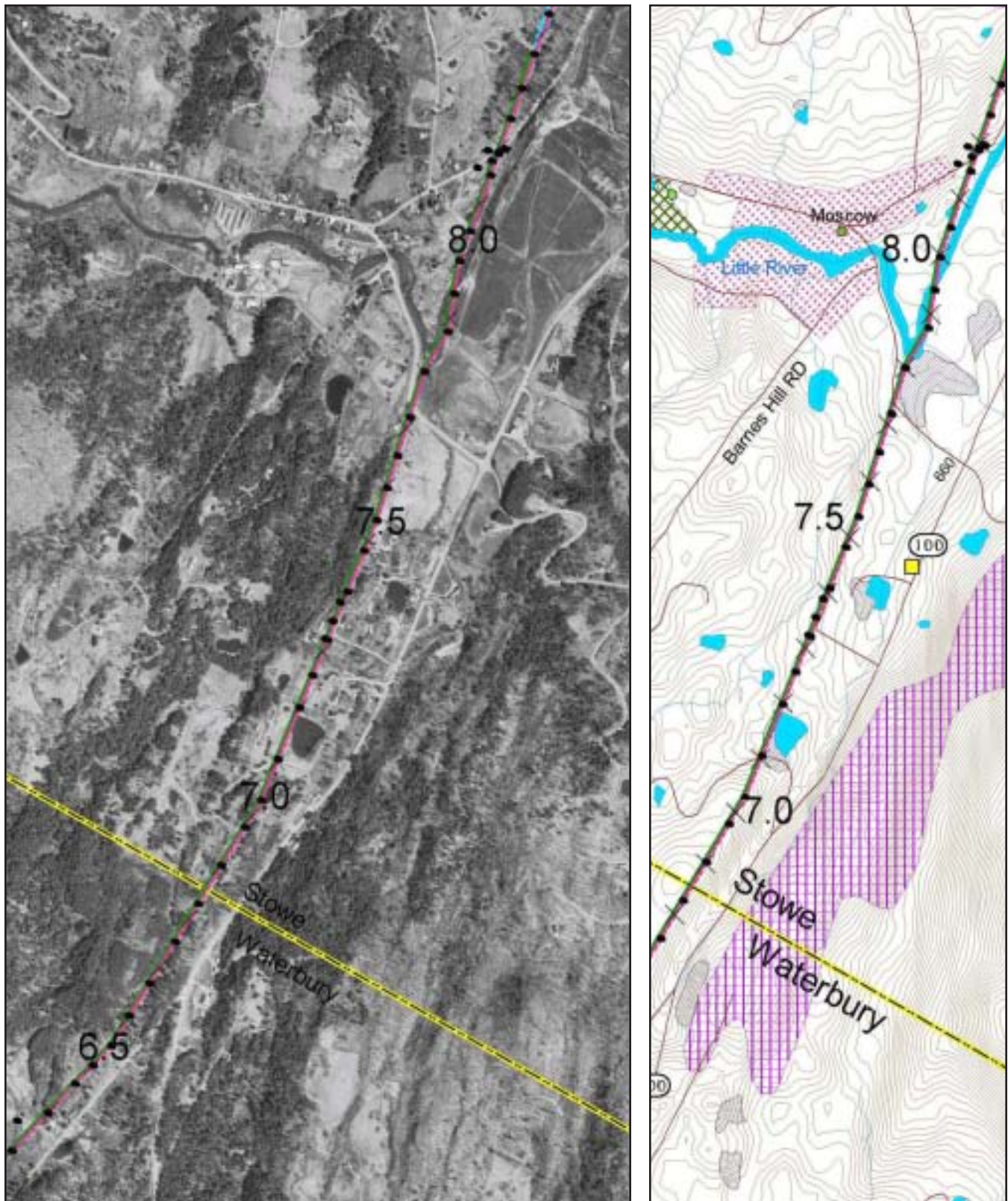
**Approx.  
Mile 7.4  
- 7.5**

View of existing line from Route 100. Background vegetation absorbs this section of the line, and proposed structures must not exceed background vegetation. Foreground vegetation is also important.



**Approx.  
Mile 7.4  
- 7.6**

View of corridor from Moscow Rd. Even with the increase in pole heights the transmission line should be backgrounded by the existing vegetation.



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**Approx.  
Mile 7.7**

View southwest of transmission line crossing Moscow Rd.



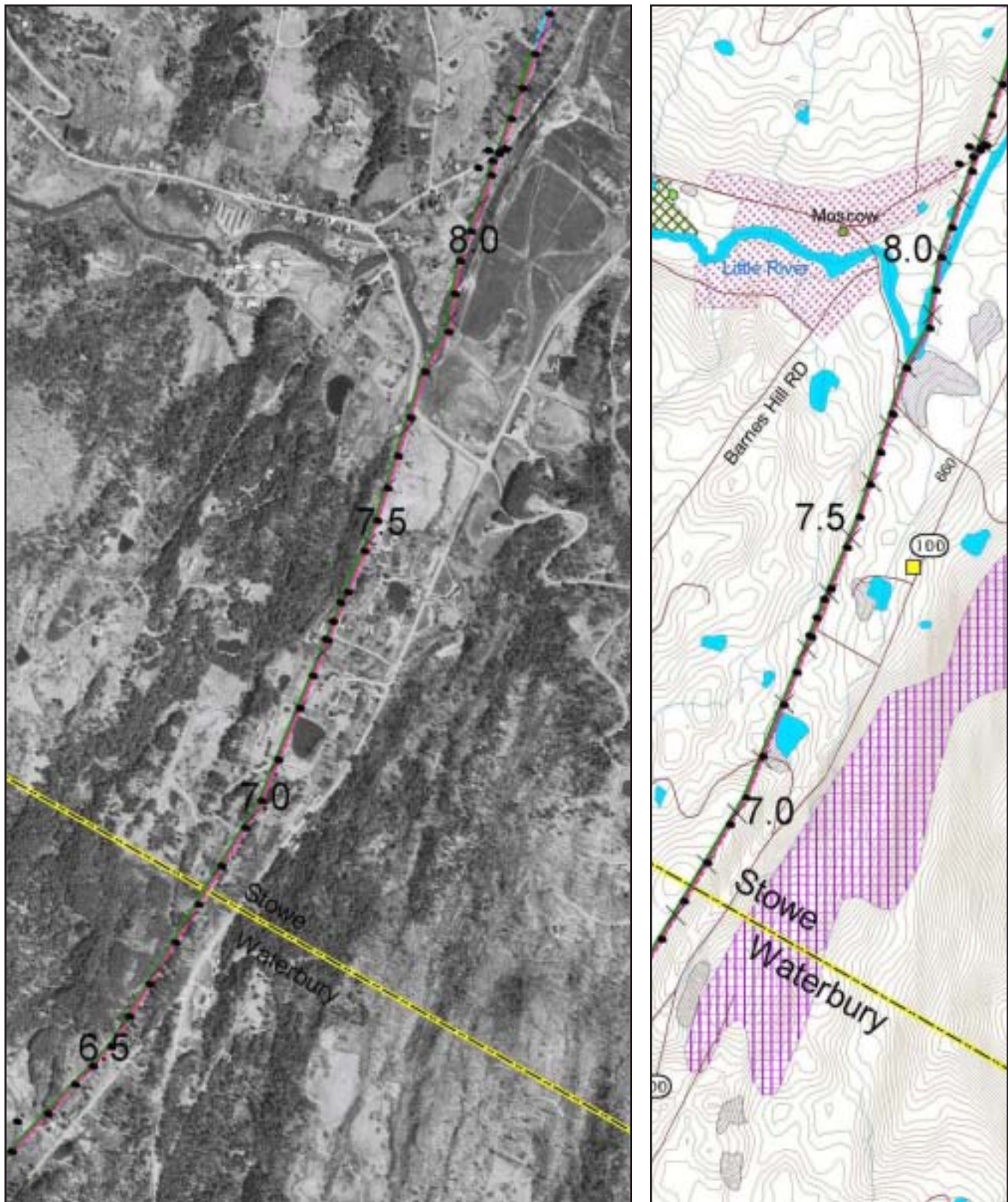
**Approx.  
Mile 7.8**

View of transmission line on north side of Moscow Rd. (Nichols Field) with the Moscow historic district and Mt. Mansfield behind the line.



**Approx.  
Mile 7.8**

Telephoto view of line in front of prominent Green Mountain Range and Mt. Mansfield views.



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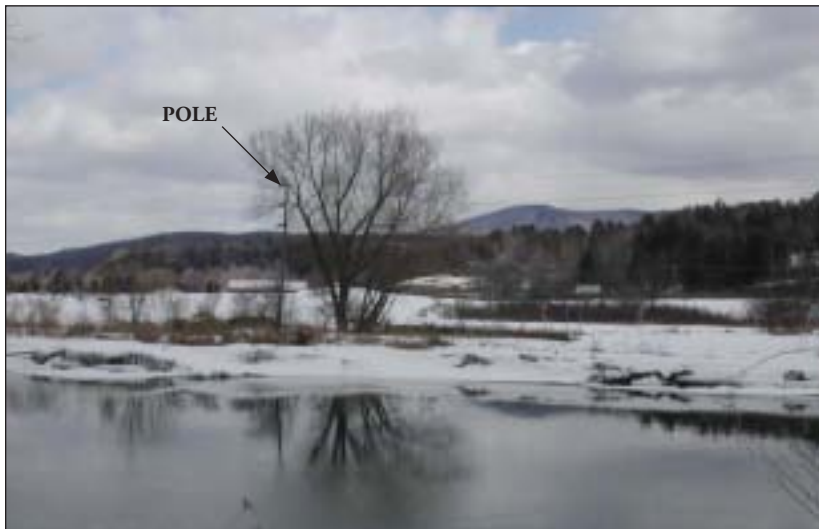
## Section 5: Stowe Town Line to Moscow Substation

DPS-DR-1



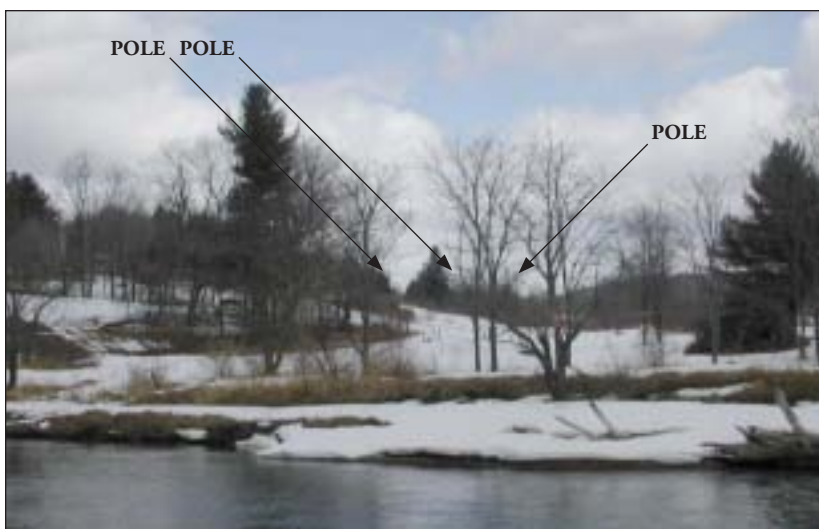
**Approx.  
Mile 7.8  
- 7.9**

View of transmission line from Nichols Field. Background is varied which helps absorb the existing corridor. However with an increase in pole number and height the corridor will have an undue adverse impact on this area.



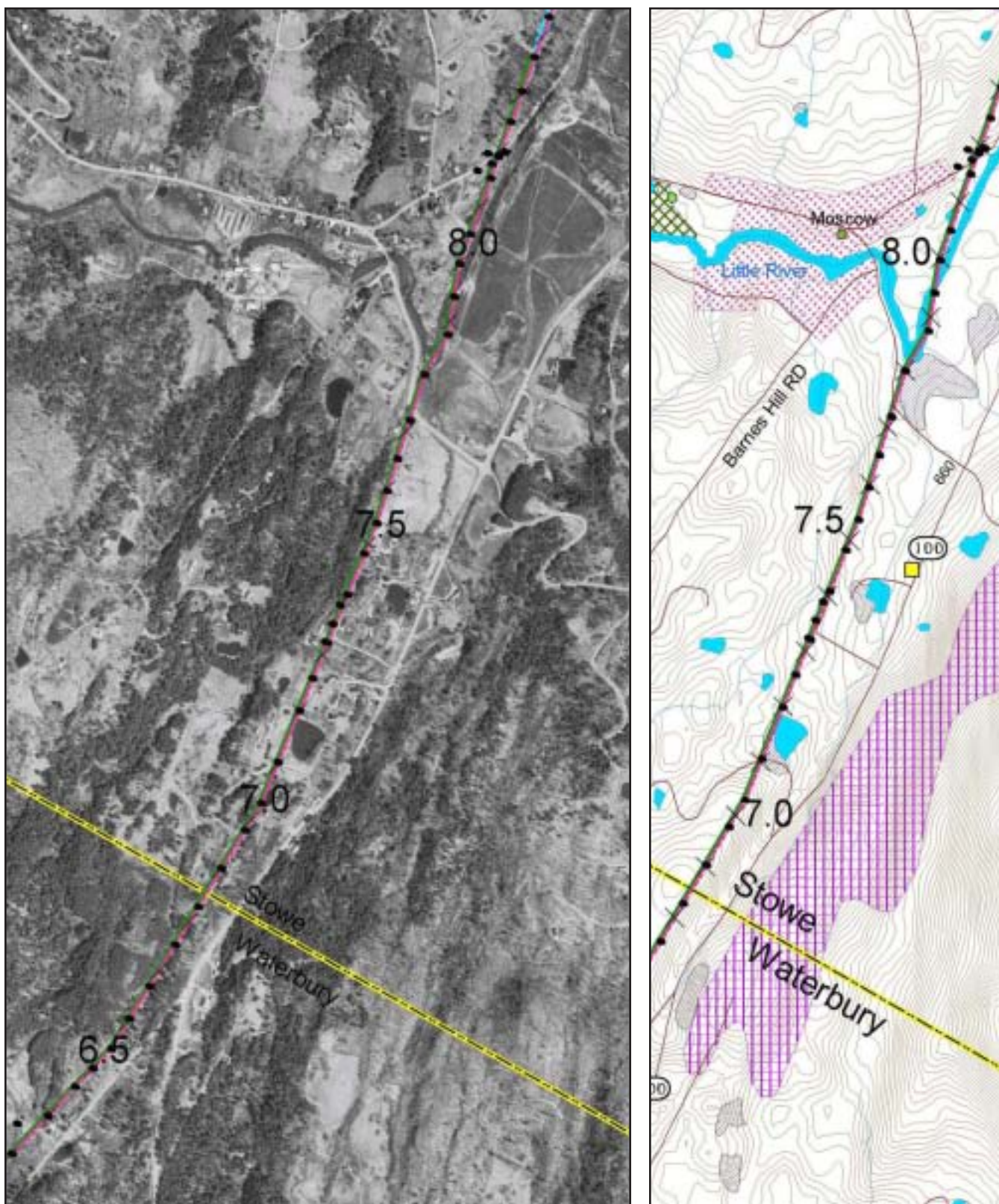
**Approx.  
Mile 7.9**

View from Moscow Rd. across the Little River with Nichols Field and the Worcester Range in the background.



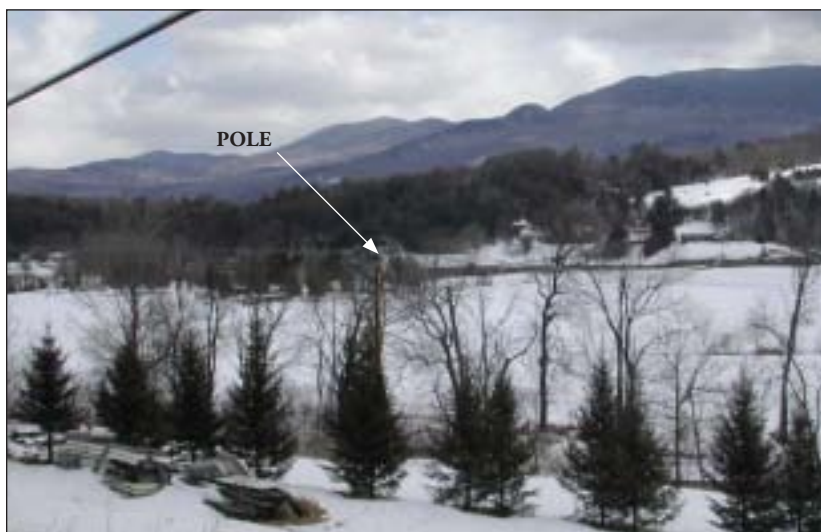
**Approx.  
Mile 7.9  
- 8.1**

Vegetation in foreground helps to assimilate existing corridor. Critical to retain vegetation and add to it.



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**Approx.  
Mile 8.1**

Location of corridor adjacent to river lessens impact to views beyond. Allow spruce to grow.



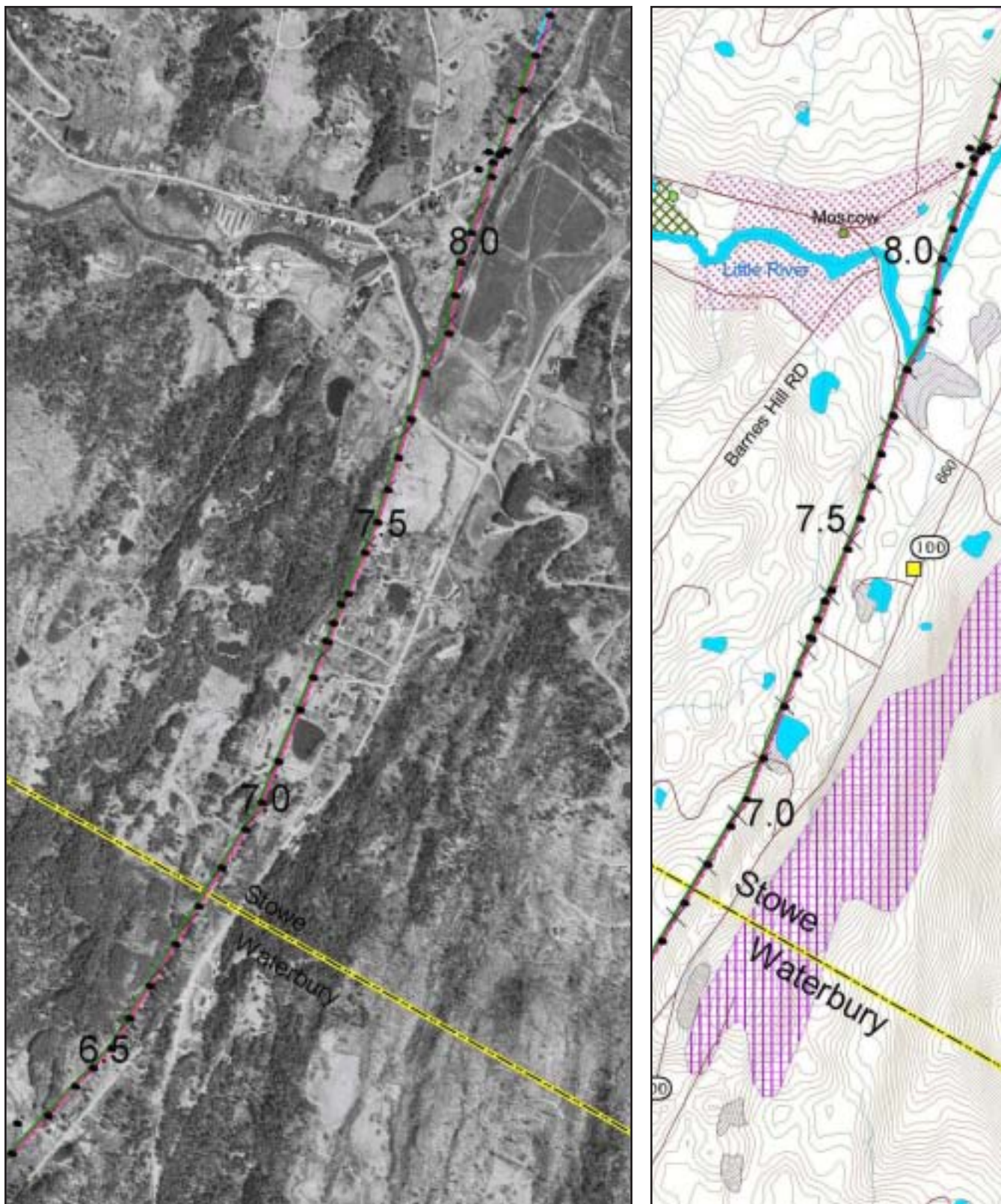
**Mile 8.2**

View southwest down corridor from River Rd.. Cut is visible in long distant view.



**Mile 8.2**

View up corridor from River Rd. Line ascends hill and is buffered from River Rd. by existing vegetation, Mountain line joins corridor at this point.



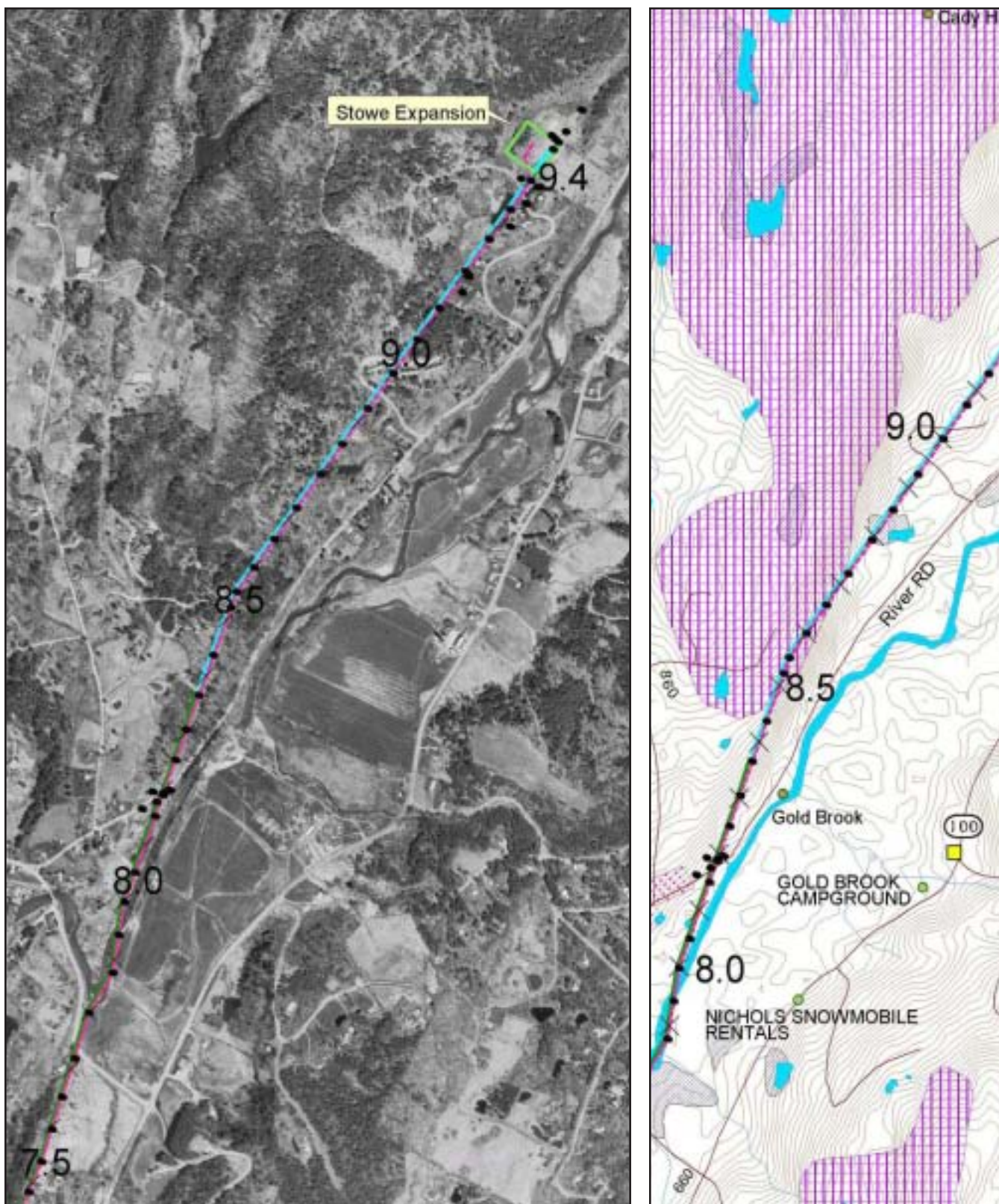
Numbers on Map represent Mile Markers on the proposed line upgrade; Shaded overlays represent Conserved Public and Private Lands, Deer Wintering Habitat, Historic Districts, Sites or Buildings, and Wetlands; Proposed line shown in red.

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### Mile 8.2

Moscow Substation located on south side of River Rd. This will be removed, resulting in an improvement in aesthetics.



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**Approx.  
Mile 8.8  
- 8.9**

View down corridor as it crosses a side road.



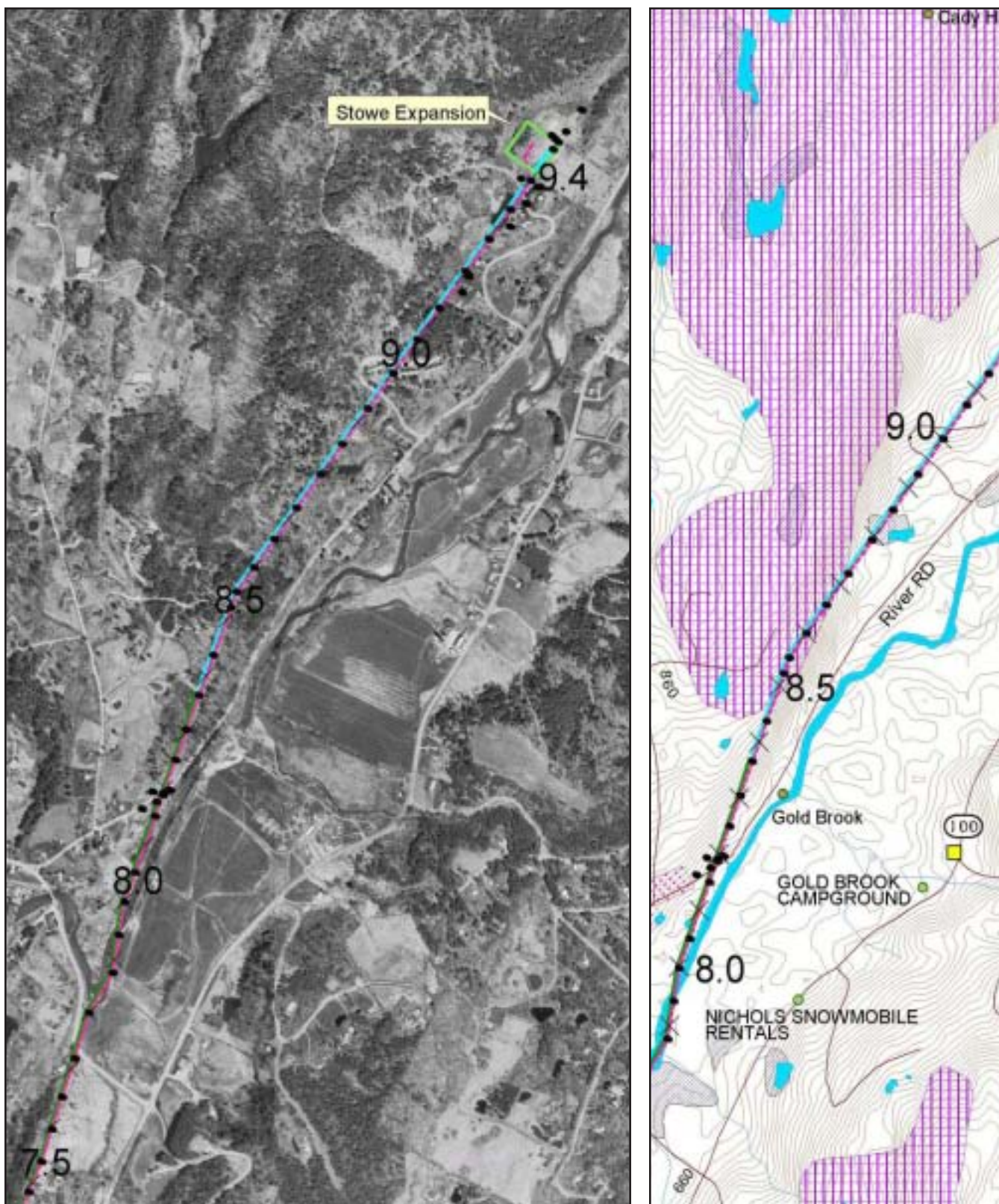
**Approx.  
Mile 8.8  
- 8.9**

View up corridor as it crosses a side road.



**Approx.  
Mile 8.9  
- 9.0**

View southwest down corridor on Holmes Rd. Foreground vegetation helps absorb corridor although cut is highly visible.



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**Approx.  
Mile 8.9  
-9.0**

View northeast up corridor from Holmes Rd. Line ascends topography rising on the north side of the road.



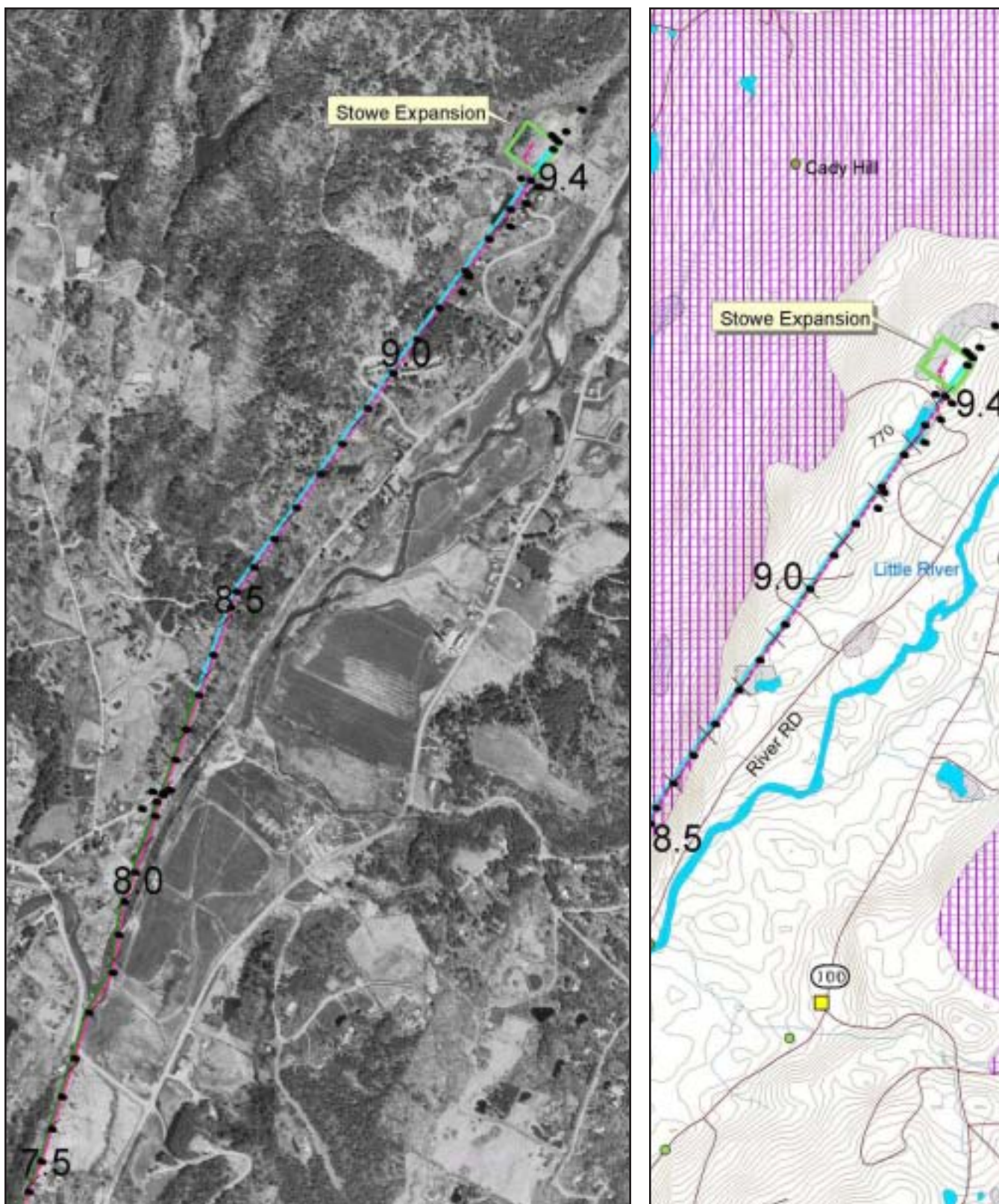
**Mile 9.0**

Corridor is highly visible from the condos on Holmes Rd., extensive mitigation will be desirable here.



**Mile 9.0**

View northeast from the condos on Holmes Ave. The existing evergreens provide a buffer for the development.



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## Section 6: Moscow Substation to Stowe Substation

DPS-DR-1



**Approx.  
Mile 9.2**

View southwest from Cady Hill Rd. approaching Stowe Substation.



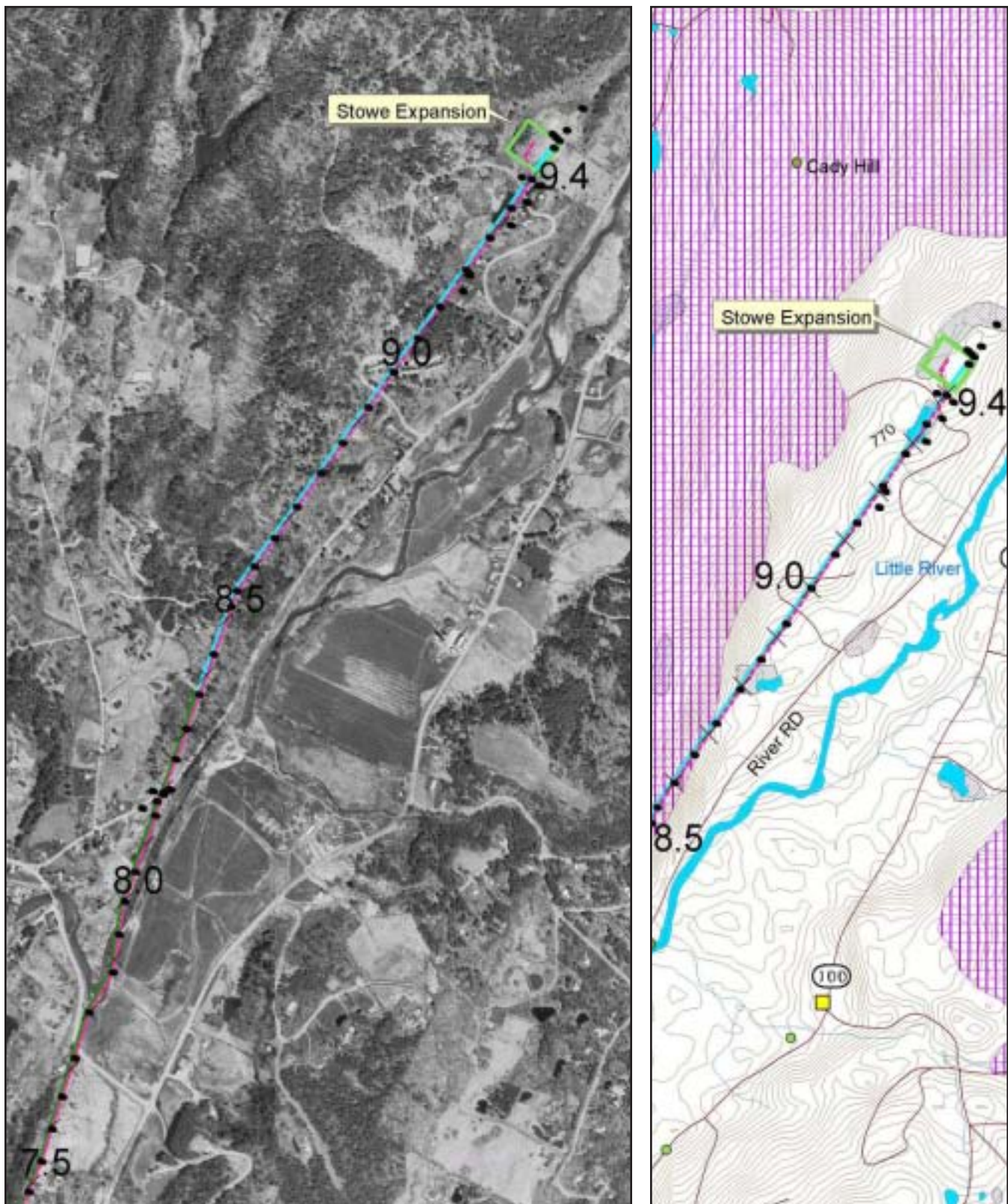
**Approx.  
Mile 9.2**

View northeast from Cady Hill access Rd. approaching Stowe Substation.



**Mile 9.4**

Area south of existing substation.



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**Mile 9.4**

Area south of existing substation



**Mile 9.4**

Existing substation. These trees will be desirable to retain. See mitigation recommendations.



**Mile 9.4**

Existing substation. Existing line leaving substation in a northeasterly direction.



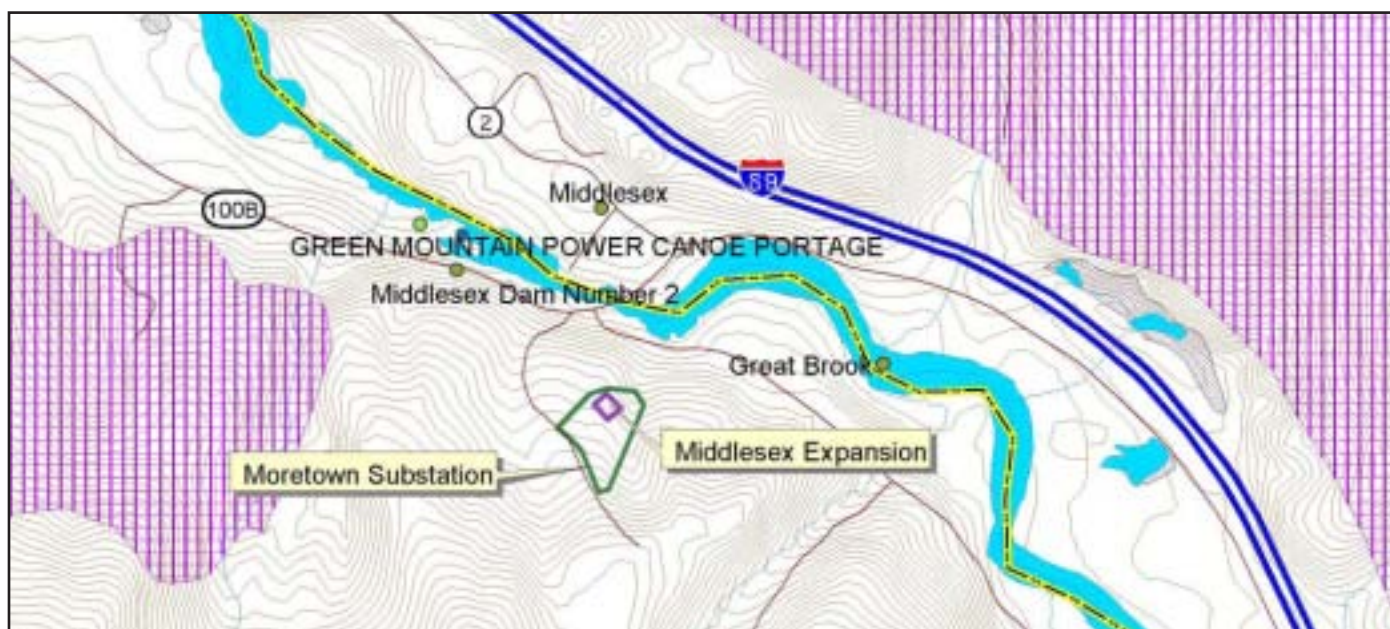
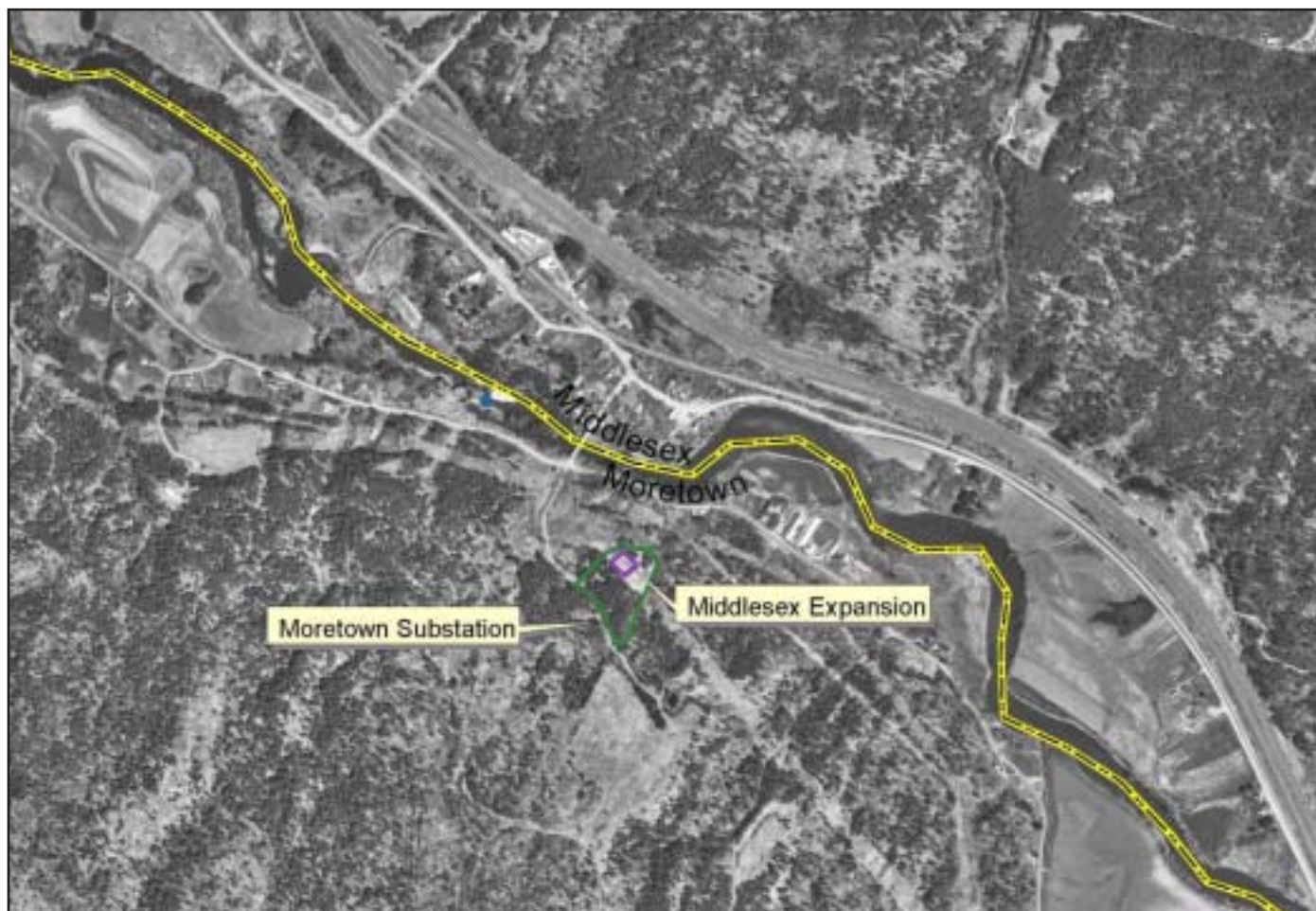
The proposed upgrade to the Middlesex Substation situated in Moretown represents a modest expansion with a proposed 110'X120' footprint, or a little under a 1/3 of an acre.

The substation itself is situated approximately 65 feet above historic Middlesex Village and due to this location is not readily visible. The expansion will add to the existing substation which has a 50'X100' graveled area surrounded by chain link fencing. The proposed new structures with the highest being a lattice terminating structure at approximately 73'.

The one light on the photocell will not pose a problem due to the lack of abutting neighbors in the immediate vicinity and the same would be for any noise generated by this facility. The existing and proposed planting (particularly if beefed up) will also provide some noise attenuation.

The Middlesex Substation is well screened from the access road with a semi mature forest predominantly composed of red pines to the west, ranging in height from 35 to 70' (Boyle-Portz-3, p. 11), although there is some visibility to the north, potentially from across the valley. This has not been sufficiently addressed in the plan, and if not there will be an adverse impact resulting. A small evergreen plantation to either side of the line and conductors could be planted and provide screening for a number of years to come, particularly if trimmed or managed as a Christmas tree plantation might be pruned/topped.

The site is overall a good site for the expansion and poses minimum aesthetic impacts with its limited visibility, although more aggressive planting is recommended.



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View of existing Middlesex substation with important background vegetation.



View looking northwest from substation. Some additional planting around the substation in this area is desirable, along with retention of existing vegetation.



Dense evergreen vegetation (much of which is red pine) surrounds the site to the northwest and west and is / will be very effective in screening the existing substation and proposed substation expansion. It is critical to retain as much of this vegetation as possible.



## Survey of Regional and Town Plan Provisions regarding Aesthetics and Electric Transmission Corridors and Facilities

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The proposed Lamoille County Project (LCP) upgrade will include transmission line and/or substation construction through parts of Washington and Lamoille Counties in the towns of Duxbury, Waterbury, Stowe, Moretown and Middlesex. The second step in the Quechee Analysis requires that a determination as to whether a project, as proposed, will violate a clear written community standard intended to preserve the aesthetic or scenic beauty of the area. Thus, a review was conducted to identify the extent and content of written community standards regarding the aesthetics of siting new or upgraded electric transmission facilities (lines, towers, and substations) in these towns.

A town or regional plan is the document most often used to express a written community standard. Town plans vary in specificity, however, and if their language is too general, the Board may find that it cannot effectively apply it to a specific situation. For example, broad goals do not constitute a clear written standard because they do not designate specific resources or areas to be protected or state how they should be protected. Moreover, a standard that “encourages”, “supports”, or “promotes” is not absolute and its application requires judgement by the decision-maker, leaving open other options for mitigation.

The review for the LCP included all regional and local standards and goals for the applicable towns and counties that have a relation to aesthetics, scenic beauty and/or utilities that we are aware of, including town and regional plans and associated documents. These documents provide a range of information with regard to scenic quality, aesthetics and policies or objectives, which may be applicable in reviewing this project.

Our analysis found that many of the statements in the plans are broad goals and visions that do not constitute clear standards within the meaning of the Quechee test and therefore concluded that there are no existing provisions that state specific community standards with regard to aesthetics and electric transmission corridors and facilities, which would be directly violated by VELCO’s Lamoille County Project. While there is no clear violation of a community standard, there are a number of identified objectives or recommendations that will influence the development of various corresponding mitigation measures.

Most town documents reference the importance of aesthetics and scenic views, and some identify specific areas of scenic value, such as the Route 100B/Mad River Corridor in Moretown, the Route 100 Corridor in Waterbury, and the Center Road and I-89 Corridor in Middlesex. However, none of these plans provide distinct aesthetic standards for development in

## Survey of Written Community Standards regarding Aesthetics and Electric Transmission Corridors and Facilities

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such areas, particularly in reference to the construction or upgrade of electric transmission corridors and facilities. For example, the Waterbury Town Plan seeks to “protect and enhance Waterbury’s visual character and aesthetic resources” (p. 6.10) and to “monitor the expansion or relocation of utilities (e.g. electrical facilities) for their effect on natural and scenic resources” (p. 6.13), but does not include standards or policies to minimize or achieve these goals. The Stowe Town Plan seeks to inventory and identify parcels with scenic or aesthetic quality, i.e. open fields within the Route 100 and 108 corridors, but because resources have yet to be identified this policy does not constitute an absolute requirement. In fact, the Town of Stowe actually advises that “the region’s electric transmission and distribution infrastructure should be upgraded to ensure the long-term availability of affordable electric energy to town residents and businesses” (p. 119).

Of the five towns, the Duxbury Town Plan perhaps has the most specific goal with regard to utilities and aesthetics, recommending that “utility lines be placed underground wherever possible or placed so as not to obstruct scenic views” (p. 69) and identifies views from River Road and Duxbury Corner across the Winooski River valley to the Bolton ridgeline as critical. The Central Vermont Regional Plan also “encourages underground placement of electric distribution lines where possible and economically practical, in order to promote the aesthetic enhancement of the Region, particularly in urban areas” (p. 74). However, these objectives do not constitute an absolute requirement that undergrounding be exercised, leaving open other options for mitigation.

Another significant area that needs addressing is that of forest land and natural resources. Many of the towns express the importance of such areas, particularly their effect on visual character. Views of these open spaces help define the character of rural living. There is also concern that clearing of forest lands fragment wildlife and natural areas. Although there are no clear standards for the clearing of forest lands with regards to utilities, this is an area that will need to be addressed to ensure that rural character and visual quality is not impacted.

The positions of the five towns in two counties along the path of the proposed transmission line upgrades vary in the extent and content of written community standards regarding the aesthetic aspect of siting new or upgraded electric transmission facilities (lines, towers, and substations). The following is a town-by-town survey of excerpts from the most current adopted town plans that may pertain to the proposed LCP.

## Survey of Written Community Standards regarding Aesthetics and Electric Transmission Corridors and Facilities

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Central Vermont Regional Plan - Adopted September 9, 2003

p. 9 Land Use Element

Resource Production

Farmlands, forest lands, and lands containing mineral resources are vitally important to the economy and character of our Region...

Forest Land p. 11

...Many recreational pursuits are dependent on, or enhanced by, forest land, as is the aesthetic quality of the Region.

Resource Protection p. 12

Resource protection lands include: natural and fragile areas, critical wildlife habitat, groundwater recharge areas, surface waters, wetlands, and scenic areas.

Scenic Resources p. 14

Central Vermont is a place of celebrated natural beauty. Its scenic landscapes not only enrich lives and spirits, and attract new businesses and residents, they also provide the basic ingredient for one of the Region's most important industries – tourism. Each year thousands of visitors travel here to see the mountain vistas, pastoral scenes, fertile valleys, historic villages, Interstate 89 (which has received awards for its scenic corridor), remote back roads, and woodlands ablaze with autumn color. Thus, it is in best interest, both psychologically and economically, to preserve the best of Central Vermont's visual splendor.

p. 22

Goal 5: To preserve the aesthetic quality of the Region.

Policies

1. Municipalities and developers are encouraged, through design and siting of structures, to make a concerted effort to preserve access to and enjoyment of scenic views for the public.
2. Unless effectively screened, or clearly in the best interest of the general public, ridge line development or conspicuous development on locally prominent landscape features is discouraged.
3. The scale and siting of new structures should be in keeping with the surrounding landscape and architecture; however, towers should utilize stealth technology.

p. 39 Energy Element

Goal 3. Policy 1: In considering public benefits of any construction, expansion or upgrading of existing public generation of transmission utilities

## Survey of Written Community Standards regarding Aesthetics and Electric Transmission Corridors and Facilities

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and/or facilities consideration shall be given to the external costs (economic, social and ecological) of any decision, and those external costs shall be reflected in the decision, as the Public Service Board has recently recommended.

### p. 50 Utilities, Facilities, and Services Element Electric Power

CVRPC's desire to ensure that energy generation, distribution and transmission facilities are located, designed and sized to support the Region's economic and lifestyle demands with minimal adverse impact, supports, and is supported by, the concept of "least cost integrated planning" and its attendant objectives.

The activities and choices of the area's utility companies can have direct and indirect impacts on land use (both locally and elsewhere). Locally, distribution line extensions can spur residential, commercial and industrial growth. Decisions regarding future power sources will also have regional or even global impacts.

p. 74 Electric Power Goal: To promote the upgrading, improvement, and expansion of electric power generation methods and infrastructure so as to provide adequate service, conserve energy, maximize public investment, and protect public health.

### Policies

6. The Commission encourages adherence to environmentally and ecologically sound utility line maintenance practices.
7. The corridor concept is generally supported by the Plan. As such, the location of new transmission lines should share existing power line routes as illustrated on the Central Vermont utilities map. However, it is recognized that existing routes may not always be optimal for additional or expanded transmission lines. It is also recognized that the construction of distribution lines within, or adjacent to, public highway rights-of-way may, in some instances, have more negative aesthetic impacts than would a parallel route away from the road.
8. CVRPC encourages underground placement of electric distribution lines where possible and economically practical, in order to promote the aesthetic enhancement of the Region, particularly in urban areas.
9. In all cases, transmission and distribution line routes shall be designed to minimize aesthetic impacts. The use of wood support structures, appropriate conductor colors for the background, and landscape compatibility techniques are encouraged.
10. Natural and cultural resource areas, as identified by this Plan, shall be avoided wherever possible, in the location or routing of new substation or

## Survey of Written Community Standards regarding Aesthetics and Electric Transmission Corridors and Facilities

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transmission facilities.

11. Substation facilities should be located in industrial areas or in those planned for industrial use whenever practical. In any case, such facilities should be sited as unobtrusively as possible.

12. Municipalities, in their plans, should consider the visual impacts of the siting of utility poles.

Lamoille County Regional Plan – December 2001

p. 50 Energy Production (Informational and Planning Document)

### 8.7.7 Electric Facilities

Energy availability and usage decisions should encourage conservation, cost-effectiveness, and a diverse and stable energy mix including alternative energy such as solar, small scale hydro, wind and efficient appliances. Development projects and transportation planning in the region must also consider the energy demands and availability with the conservation of energy as a priority.

p. 29 Utilities & Facilities (Policy and Implementation Document)  
Strategies

1. Where feasible, be sited in areas not highly visible to the traveling public, or from residential areas, historic districts, and public use areas or outdoor recreation areas such as hiking trails and beaches;
3. Utilize materials, architectural styles, color schemes, lighting fixtures, mass and other design elements to promote aesthetic compatibility with surrounding uses and to avoid adverse visual impacts;
4. Where prominent views of the site exist, be located downgrade of the ridge so as not to exceed the elevation of the immediate ridge;
6. Avoid peaks and ridges which function as regional focal points where feasible.

Town of Duxbury Town Plan - Adopted June 11, 2001

p. 28 Natural Resources- Wildlife

Importance of contiguous forest lands and connectivity between habitats  
Several scientific studies have shown that even small openings in a forest, such as a road or house clearing, can affect sensitive “interior species”...the cumulative effect of many small clearings and road networks will compound these problems, and large contiguous tracts of forest land will remain a vital and increasingly rare habitat requirement, and forest fragmentation an increasing threat.

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p. 32 Natural Resources – Forest Land

Several privately owned parcels have significance to the overall town...

Another area of significance is a large parcel along the top of Crosset Hill.

Both of these have ecological value because of their size, their relatively high altitude, and their location next to existing protected areas.

p. 46 Transportation – Scenic Roads

...an overwhelming majority of the citizens believe that the preservation of the town's rural character should be a major objective of its planning effort. It is also clear that our scenic roads are an essential part of our rural character. Many of the town's roads contain stretches of unquestioned scenic value...In this regard, it is essential that the following scenic vistas be protected to the maximum extent possible: views from River Road and Duxbury Corner across the Winooski River valley to the Bolton ridgeline.

p. 56 Electricity

This plan recommends that utility lines be placed underground in areas of aesthetic sensitivity and requires that any utility lines extended into the Timber Management and Wildlife District be placed underground. Since the vast majority of the residents of Duxbury depend upon springs and wells for their water supply, this Plan encourages utility companies to adhere to environmentally and ecologically sound utility-line maintenance practices. Mechanical maintenance procedures are favored over chemical maintenance.

p. 69 Recommendations for Implementing the Plan

A. 3. Seek ways to prevent forest fragmentation and the loss of prime agricultural lands.

B. Preserve the natural resources that are essential to Duxbury's rural character.

e. Discourage by regulatory or non-regulatory means the fragmentation of large tracts of contiguous forest lands.

f. Explore the feasibility of a designated and protected wildlife corridor along the Winooski River (particularly along intact forested areas), along the ridge of Crossett Hill from Camels Hump State Park to the Winooski River, and from Duxbury to Moretown via a crossing along Route 100.

C.3. Preserve the rural character of town roads.

a.iii. And utility lines should be placed underground wherever possible or placed so as not to obstruct scenic views. Routine maintenance of utility rights-of-way should preserve the natural vegetative cover whenever possible.

C.4.b. Discourage extension of power lines into remote parts of town.

C.4.c. No above-ground utility lines may be installed in the Timber Management and Wildlife Zoning District.

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Town of Middlesex Town Plan - As adopted by the Middlesex Voters March 5, 2002

p. 27 Natural Resources

Middlesex residents would like to keep their town a rural place to live. Residents value an environment where natural and human communities coexist: a place where we depend on the maintenance of our natural resources for our social and economic well-being. The highest priority of the town of Middlesex regarding its natural resources is to carefully strike a balance between the human use of the Town's natural resources and their long-term viability.

4) The natural resources of Middlesex should be protected and maintained to enhance the visual and recreational opportunities of those living and passing through Middlesex.

Forests and Fields (p. 29)

The combination of forests and fields are a significant element in determining "rural character" of Middlesex. The views of these open spaces to a large extent define the character of rural living.

p. 31 Transportation

3. Scenic vistas, roadsides, and bridges that are publicly owned should be maintained as part of the regular road maintenance program.

p. 43 Facility Goals & Recommendations

1. To provide the facilities and services needed within the village to support and strengthen its central role within the community and to allow for compatible village growth and development.

p. 45 Land Use Goals & Recommendations

9. Protect aesthetic and scenic character of the Center Road and I-89 corridor.

p. 49

3) Lands zoned for privately owned entities that have potential for large positive and negative public impact should be planned for maximum utility both for owners for and the public, and to the extent developing 2022, will conform to the then-current plans. These will, at a minimum, carry their full burden of costs for the public services and facilities they use or have impact on.

p. 50

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Task C. Long-Range Planning for Public Services and Facilities. The end product of this task is:

A long-range plan, schedule, and associated budget for the location, capacity, and installation of public services and facilities that voters will want and need in the coming two decades.

Moretown, Vermont, Town Plan - Adopted by the Moretown Selectboard  
August 27, 2002

p. 30-31 Natural & Cultural Resources

Open Space/Scenic Resources: Despite the lack of public lands and aggressive land conservation efforts, Moretown is fortunate to have retained much of its rural character and scenic landscape...Two areas, in particular, are of critical importance to the town's rural character and scenic landscape. These are: Route 100B/Mad River Corridor and Northfield Range/Cobb Hill.

Scenic Roads: Moretown's road network provides a popular vantage from which local residents can enjoy the Town's scenic landscape...Scenic roads are identified on Map5-8. To maintain the features that contribute to the scenic qualities of these roads, those features should be identified and appropriate management strategies put in place to ensure that necessary maintenance may occur in a manner that does not harm those scenic features.

The scenic nature of several public roads are a resource that should be safeguarded. (p. 33)

3) New development should be accommodated in a manner that maintains and enhances the town's scenic resources and working landscape. (p. 34)

3) The Planning Commission shall explore options for protecting natural and scenic resources... (p. 35)

p. 58 Community Facilities & Services Goals

1) The provision of community services, facilities and utilities to meet present and future demands of Moretown residents in a cost efficient and environmentally sound manner.

Policies

5) Establish a strong commitment to energy efficiency.

10) Encourage private facilities and services to relieve burdens on municipal facilities and services.

13) New development should not overburden the town's ability provide services and facilities in a cost effective manner.

16) Low-tech solutions to meet infrastructure needs should be considered

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before new infrastructure is developed.

### p. 68 Land Use

#### Goals

2) To regulate land development in order to protect the town's important natural, cultural and scenic resources while allowing diverse land uses in appropriate locations and strike a balance between community and individual interests.

#### Policies

4) Promote the preservation of scenic vistas by maintaining open land.

9) Protect the rural scenic character of the land along Route 2 east of the landfill to the Middlesex bridge.

#### Tasks and Strategies

7) The town shall actively participate in Act 250, VTrans, and other state level development review processes to ensure that all new proposals meet the policies of the plan.

Stowe Town Plan - Adopted by the Stowe Selectboard December 8, 2003

### p. 88

To allow for higher distribution voltages, future distribution line upgrades may require wider rights-of-way. It is the intent of the town to continue to site new rights-of-way within existing public rights-of-way where feasible.

### p. 101 Working Landscape

#### Policies:

3. Stowe's scenic landscape and rural character shall be protected by:

a. the careful siting of residential development to avoid placement in highly visible locations on hillsides and ridgelines, or on open meadows and productive farmland.

c. requiring that development be adequately landscaped, and that street trees be established along well traveled public roads to create a canopy.

#### Tasks:

2. Consider, in consultation with affected landowners, expanding the Meadowland Overlay District and associated Transfer of Development Rights program to include lands not currently designated as meadowland, including farmland located in the Route 100 corridor.

3. Prepare an open space inventory for the town which identifies parcels containing one or more of the resources identified in Chapter 3, and establishes a process for setting conservation priorities and discussing conservation options with affected landowners. At a minimum, the open space inventory should explore the potential for preserving, through the purchase of development rights or other voluntary landowner actions, the follow:

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- a. scenic gorges and river accesses;
- b. working dairy farms;
- c. large tracts of farm and forest land;
- d. undeveloped forest land;
- e. open fields within the Route 100 and Route 108 corridors.

### p. 104 Settlement Pattern

#### Policies:

12. The extension of roads, sidewalks/pathways, utilities and associated infrastructure shall be configured in a manner that promotes the purpose of the district within which they are located, supports the integration of contiguous parcels and the logical extension of such facilities beyond parcel boundaries.

14. Consistent with the goals set forth in this town plan, to work cooperatively with other communities and interested parties to support traditional compact settlement patterns, rural landscapes and open spaces and to prevent the negative impact of sprawl and strip development along major corridors in and around Stowe, especially along VT Route 100 from Waterbury and Morristown.

#### Tasks:

3. Consider revisions to the zoning regulations that would preserve the scenic rural qualities of the Route 100 corridors as gateways to the Town.

### p. 119 Energy

Goal: To encourage through municipal utilities, policies, and programs the availability, affordability, and efficient use of energy resources including the development and use of renewable energy resources in a manner which protects public health and safety, and minimizes adverse environmental and aesthetic impacts.

#### Policies:

1. The town will continue to ensure, to the extent of its abilities, the availability of electric energy at reasonable cost to local customers through active involvement in the state's formulation of electric utility policy, including utility restructuring.

8. The region's electric transmission and distribution infrastructure should be upgraded to ensure the long-term availability of affordable electric energy to town residents and businesses.

2003 Municipal Plan for the Town & Village of Waterbury, Vermont -  
October/November, 2003

### p. 6.1 Topography & Drainage

Because higher elevation land often serves as the background to the town's

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most scenic views, development in such areas can stand in stark contrast to its surroundings...it is important that development on steep slopes and ridgelines be reviewed for potential environmental and visual impacts....In Waterbury, land along the Worcester Mountain Range is particularly vulnerable to both adverse environmental and visual impacts associated with development on steep slopes and along higher elevations.

### p. 6.8 Forest Resources

Waterbury's forest resources contribute to the community's economy and quality of life and should be protected from incompatible uses...Waterbury's wooded hillsides and ridgelines are widely appreciated for their contribution to the area's panoramic vistas.

### p. 6.10 Open Lands & Scenic Resources

Open land – whether it's farmland, forestland, wetland, ledge, slope, or public land – is an environmental, economic, and cultural resource. These open spaces provide livelihoods, recreation, wildlife habitats, and water supplies. They contribute to the desirability of the area for tourism, help define Waterbury's rural character, and contribute to our quality of life.

Waterbury has numerous scenic vistas of surrounding mountains and valleys, which contribute to its visual character. Both the Green and Worcester Mountain Range are prominent features when traveling east or west on the highways adjacent to the Winooski River in the southwest portion of town.

The higher points in Waterbury are visually prominent. Development and the removal of vegetation will be more noticeable at these elevations and on prominent hills and ridgelines than at lower elevations.

### Objectives

1.2 Protect the economic and ecological viability of Waterbury's forest and agricultural resources.

1.3 Protect Waterbury's wildlife resources and discourage the fragmentation of large forest blocks.

1.5 Protect and enhance Waterbury's visual character and aesthetic resources.

### p. 6.13

#### G. Open Lands and Scenic Resources

1. Minimize the adverse impacts that development within the Route 100 Corridor may have on natural, scenic, and historic features. Encourage the conservation of open space and scenic resources along the corridor.

2. Consider the potential visual impacts of development on scenic vistas.

3. Monitor the expansion or relocation of utilities (e.g. electrical facilities)

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for their effect on natural and scenic resources.

### p. 7.3 Energy Supply

#### Electricity

Green Mountain Power Corporation (GMP), the second largest electric utility in the state, is the primary supplier of Waterbury's electrical power. Almost every home and business is served by Green Mountain Power, with the exception of a few residences on Gregg Hill that are served by Stowe Electric. The near term electric power supply is relatively stable.

### p. 9.20 Community Facilities and Services

#### Transmission & Distribution Lines

There are two major transmission lines in Waterbury, one skirting the southwest corner of town that feeds into the Winooski Street substation, and another running from the Deforge Station to a substation just off Route 100 southwest of Waterbury Center. There are also two principle distribution lines, running north-south through the western half of the town – one paralleling Route 100 from Waterbury Village to the Stowe town line, and a second roughly paralleling that to the west. Three-phase power is available for industrial uses. The undergrounding of distribution lines along Main Street through Waterbury Village will be undertaken in association with the Main Street construction project.

### p. 9.22 Goals, Objectives, and Actions

Goal 2. Provide utility services and municipal facilities that support orderly growth and controlled development at a rate and in locations that Waterbury can accommodate.

### p. 11.6 Route 100

Several scenic views, including distant mountain peaks and broad expanses of open space, can be experienced while traveling along Route 100. For many visitors, it is their only experience of Waterbury. Development within the corridor has the potential to detrimentally alter the visual and rural character of community; it also has the potential to improve upon it.